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The Public Health Journal

TORONTO CANADA

STATE MEDICINE SANITARY REVIEW HEALTH PROGRESS

The Official Organ of the
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and of the
Ontario Health Officers' Association

DR. GORDON BATES - - - - - Editor

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Isolation, Its Value and Limitations

BY CHARLES V. CHAPIN, M.D., *Superintendent of Health,*
Providence, R.I., U.S.A.*

THE term isolation is here used in its broadest sense, meaning the cutting of communication between the sick and the well.

Probably every one will admit that the results of the attempts at isolation during the past thirty or forty years have, to say the least, been disappointing. It is true that phenomenal success in the control of certain contagious diseases has been attained, where artificial immunization is possible, or when massive infection by water, or food, is preventable, or when insect carriers can be largely eliminated, but the prevention of those diseases which are spread chiefly by fairly direct contact of person with person has not been very successful.

During the eighties of the last century our English friends expected to exterminate scarlet fever by hospitalization, but the incidence of this disease has not decreased in English cities, even when from ninety to ninety-five per cent. of notified cases are so isolated. London is, even now, passing through a very extensive outbreak. There has been little, if any, change in the incidence of scarlet fever and diphtheria in the United States, though the mortality has greatly decreased. We admit 60,000 cases of smallpox in our country last year, and perhaps there were half as many more, though this ought to be one of the easiest diseases to control by isolation and quarantine, and we also have an invaluable aid in vaccination. During 1917 and 1918 there were in the army of the United States 86,000 admissions of measles, and 188,000 of mumps. No one claims that, as yet, demonstrable impression has been made on measles and whooping cough in our cities. Surely we must admit decided limitations to the value of isolation in the past. Nevertheless, we believe that isolation has done much good. It may be that, with greatly increased means of communication, contagious disease would have vastly increased, and that we really owe much to isolation in that the incidence of these diseases has remained nearly stationary instead of overwhelming us. It is possible, too, that isolation has decreased the virulence of some diseases. Severe strains are recognized, isolated and stamped out. The milder strains escape recognition, spread and immunize the population. Scores and scores of times, during the last twenty-five years, virulent smallpox has been introduced into Canada and the United States from Europe, Mexico and Asia, and outbreaks have occurred from Winnipeg to New Orleans, from Vancouver to Boston, but with one or two exceptions they have been promptly stamped out. Meanwhile, though smallpox mortality has been cut down to an infinitesimal figure, the disease itself is almost as prevalent as diphtheria.

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*Substantially as read at the meeting of the Canadian Public Health Association held in Toronto, May 16, 1921.

Scarlet fever is now generally of a mild type, but not always so. Outbreaks of a severe strain occasionally develop here and there, but soon disappear. Is it not very possible that they are stamped out simply because the patients are quite sick and a physician is called and the fact is known to the neighbourhood? We had such an outbreak in Providence some years ago, which lasted only about three months. The mild type which was prevailing at the same time long remained.

Another point to be emphasized is that we should concentrate our efforts where they will do the most good. I do not know of any health department which has money enough to do all that needs to be done to control communicable diseases. It is therefore necessary to decide as to what shall be left undone. Why not decide which diseases are most important and which are the most susceptible of control, and put all our efforts on these? There are some diseases which we are constantly urged to attack, but which for the time being, at least, might well be neglected. I refer particularly to chicken pox, German measles and mumps. These are so negligible as a cause of death, in civil life at least, that they should not divert our energies, even if we could control them, of which there is not the slightest evidence.

There is another class of diseases for which it seems unwise to spend much money for isolation, not because they are unimportant, but because there is no evidence that isolation can in the least control them, and we should not put useless burdens on afflicted families, and compel physicians to make needless reports and divert the health department money from where it may accomplish something. Chief among these diseases is influenza. There is no evidence that isolation and quarantine have any effect on the prevalence of this terrible disease, yet there are many persons who urge that influenza be isolated as is scarlet fever. This is a disease the germ of which is unknown, the mode of transmission guess work, and the period of infectiousness undetermined, a disease undefined and impossible to diagnose and in which, even under the best circumstances, not half the cases will be reported. Some enthusiasts also are recommending the isolation of all cases of pneumonia. It probably would have no effect in limiting its prevalence. Though the group of diseases comprised under the name pneumonia are doubtless contagious, according to the scientific definition of the term, we are still uncertain about the prevalence of different types, at different times, and in different places, the number and permanence of carriers is still unknown and equally uncertain is the relative importance of lowered resistance and the transmission of virulent strains. In whooping cough we have little to hope for from isolation. The disease is not likely to be recognized until its period of infectiousness is nearly over and a large proportion of cases are never seen by a physician. There is little evidence that the strict isolation of measles is of any value in checking the prevalence of the disease in an urban community. Many communities are trying to control this disease and it is perhaps well to permit these experiments to proceed, but there is really little warrant for urging it upon cities as an effective line of health work.

Another point of practical importance is that, if there are only a few cases of disease, the chance of control is far better than if there are many, and consequently one is justified in going to more expense, and adopting more stringent measures. If smallpox, or typhus fever, should be discovered in Providence, even if there seemed to be two or three foci and a dozen or two of cases, we would be justified in isolating every patient until there was not the slightest chance of infection and in diligently searching out all contacts and in keeping them under control, or observation, until after the maximum period of incubation. Usually, but not always, the disease would be stamped out. On the other hand, we are now, in Providence, in the midst of an outbreak of measles, and I do not suppose that there is a single person in this room who thinks that there is any chance whatever that the most energetic methods of isolation of cases and control of contacts would cut it short.

This leads us to another consideration. If, in a town of a thousand inhabitants, or out in the country, a case of measles should come to light, it would probably pay to secure the strictest sort of isolation of the patient and control of contacts, just as would be done for smallpox in Winnipeg or Toronto. The chance of stamping out the disease would make it worth while. Many years ago a study of contagious diseases in the smaller communities in Michigan showed the much greater value of restrictive measures in such than in large cities. It appeared that in many of the smaller places nothing was done to control the contagious diseases, even smallpox, while in others earnest efforts were made. A tabulation of results showed that where restrictive measures were applied to measles the cases per outbreak were over 90 per cent. less than where isolation was neglected. An examination of the individual town reports revealed the fact that these good results were due chiefly to the fact that when the first case or two were caught, the disease was very often stamped out. When once a village was well seeded with measles it was almost as difficult to stamp it out as it is in Detroit or Providence. Isolation was effective, too, in scarlet fever and diphtheria, though in a lesser degree and even in typhoid fever, though, as would be expected, to not nearly so great an extent. Our registration statistics show that, generally speaking, contagious diseases are more prevalent in cities than in the rural parts of our registration area. This was also shown during mobilization by the much larger number of non-immunes from the rural sections of the United States.

There are doubtless many less points of contact in the country than in the city and foci of infection are more generally known and more easily avoided. This probably accounts for what might be called the natural protection of the rural population. Restrictive measures are more effective because of the fewer points of contact and it must also be easier to trace infection. Modern methods require the health officer to go out from each case of scarlet fever, or smallpox, and search for sources and contacts, and this, in the villages and farms of Minnesota, or Ontario, is quite a different matter from what it is among the complex interrelations of the compact and heterogeneous population of Minneapolis or Toronto. I can well believe that the closure of schools is often effective in the country in controlling disease, though in cities it is of no use whatever, and, some of us think, is a positive harm. When a city school is closed the children are likely to come into closer contact in their play and the vacation permits more frequent excursions from the restricted school district to other parts of the city.

It is a fair conclusion that it is much easier to control contagious disease in a small community than in a large one. Isolation and quarantine will yield greater results in the country. It will pay state and provincial health officials to devote their chief attention to the rural sections and small towns, striving to improve the efficiency of the service which deals with contagious diseases.

The first step in the control of contagious diseases is the location of cases. The reports of physicians are, in practice, chiefly relied on for this. Many of the regulations governing notification are absurd. Make reporting as easy as possible for the doctor if you want him to report. Name, residence and disease are enough. Let him report by telephone, or laboratory specimen, if he likes. Above all, do not ask for reports of which no real efficient use is to be made. If nothing is to be done with influenza or pneumonia, with chicken pox and German measles, do not require their notification.

Only a part of the frank cases can be discovered through physicians' reports, and they reveal no "missed" cases, concealed or otherwise, and no carriers. Physicians are in part to blame for incomplete reporting, partly because, from lack of experience and faulty training, they fail to recognize the disease, less often because they deliberately aid the patient in concealment and more often because by experience they have learned that the health officer will take no efficient action, and they do not feel any very strenuous call to do their duty if he does not do his. No one would expect to stop a conflagration by putting out the fire in a few places and letting it burn in others. To control the acute contagious diseases we must get most of the cases, and this cannot be done by waiting for doctors' reports.

The reported case must be merely the starting point. The health officer must go out from this to find where it came from and who has been exposed. Oftentimes this can be done step by step, one case or contact leading to another. Occasionally, a house to house canvass is useful, perhaps of a neighbourhood, perhaps of the whole of a small town. Most of us, even in large cities, have done this successfully from time to time with such diseases as smallpox, or typhus fever, which had not become thoroughly epidemic. Hill and Chesley, in Minnesota, were the first to systematically apply this search for cases and contacts to such common diseases as scarlet fever, diphtheria and typhoid fever. They were the first to demonstrate its practicability and clearly to set forth the principles of this practice and the necessity for it.

Starting with a notified case, say, of scarlet fever, the epidemiologist must seek out two sets of persons. Manifestly one of these groups consists of every one who has been in contact with the case while the case was in an infectious condition. This may mean a very large number of persons, and it certaintly is a difficult task to find them all. Every one of these contacts, until it is proved otherwise, must be considered a suspect, likely to be a carrier, or likely to come down with the disease. Another group also must be sought out, called by Hill and Chesley "associates." These are persons who were friends of the notified case, but who did not happen to be with him while he was infectious, but had been more or less intimate with him in various ways. It is perhaps even more difficult to find these "associates" than it is the actual contacts. Nevertheless, they must be found studied and controlled, for they, too, are a potential source of danger, and their recognition may lead to the discovery of some earlier missed case, for it is obvious that every one of these associates of the notified case may have been in his company while he was exposed to the unknown source, may be in the stage of incubation, may be a carrier, or may even be suffering from a mild unrecognized attack.

It is certain that to do these things requires skill and training, and these, at present, are hard to find. Moreover, it requires a considerable force of employees, and this requires money, and this nowadays, is hard to get, even when we have clear-cut proof that public health really is thus purchasable. Hill says that under present conditions one epidemiologist and two public health nurses are needed to do this work for each 20,000 of the population.

Hill and Chesley have shown most clearly the success of such methods in small towns and villages, but it is certainly very much easier to trace routes of infection in such places and to control human relations than it is in larger communities. I am not aware that scarlet fever or diphtheria has been stamped out and kept out in any city of 50,000 inhabitants in Canada, or in the United States. While insurance companies and rich foundations are giving demonstrations of the control of tuberculosis, malaria, hookworm infection and yellow fever, would it not be worth while to demonstrate that a city like Toronto, or Rochester, or Providence can be freed from scarlet fever, or diphtheria, and kept free by efficient and practicable methods of isolation and quarantine.

The next problem is the isolation of the patient. The most effective isolation is in the hospital, but it is expensive, costing at present three or four dollars, or more, per day. Hospitals are necessary for many cases for which isolation is impossible at home, or in hotels, schools, or institutions. Moreover, often, as in laryngeal diphtheria and meningitis, the welfare of the patient demands hospitalization. English experience shows that, even practically complete hospitalization, produces little effect on disease incidence, though it prevents some family infections. With efficient home supervision hospitalization would be still less necessary. The hospitalization of one patient for a month costs as much as the services of a visiting nurse for that period. Such a nurse could closely supervise a dozen, or more, families at home. Would it not be far more effective?

General compulsory hospitalization is to be avoided. It causes the concealment of cases and creates a spirit of antagonism to the health department which is most unfortunate.

Even the ordinary crude sort of home isolation seems to be rather surprisingly effective. The frequency with which disease spreads from one family in a house to other families using the same doors and hallways and often the same water closets is not great. During a long period of years in Providence it has spread in from between 6 and 7 per cent. of both scarlet fever and diphtheria families. Careful analysis indicates that a large proportion of these infections took place before the primary case was notified, and, of course, some occur after isolation is terminated. Very few take place during the time in which the case is officially isolated, yet isolation has been poorly carried out in Providence. For the most part it has depended upon the warning placard, the family, the doctor and the neighbours. It is only recently that I have been able to get even two nurses.

Doubtless the most effective means of securing home isolation is by the daily visit of a nurse. Even one or two visits early in the disease have proved to be very helpful. With efficient nursing supervision, I believe that, in all families except the very poor, very crowded and very careless, an excellent degree of isolation can be secured at home, good enough for all practical purposes. As Hill says, we cannot expect 100 per cent. efficiency, and according to him we do not need it. If the child is not much sick, and does not require much nursing care, as happens very, very often, it is by no means difficult to teach a fairly intelligent mother how to use a wrapper when waiting on the patient, always to wash the hands well on leaving the room, to take as little into the room as possible, and to sterilize everything which comes from the room.

The popular conception of quarantine is shutting up a house where there is contagious disease and compelling those in it to stay there during the period of isolation of the case. Something like this is actually what is done by health officers in many instances. This practice seems to be based on two theories, one of which is that the really important contacts are the members of the family and the other is that isolation will probably be so poor that these contacts may become infected at any time during the course of the disease.

Now it seems reasonably certain that the family of the sick one comprises only a small portion of the contacts and that, if they only are quarantined, quarantine will be a failure, which statistics indicate that, to a large extent, it is. Undoubtedly those are correct who claim that the failure to control contagious disease is due chiefly to the fact that so many contacts are not found and not controlled. Provided search has been made for contacts and associates, both within and without the family, how are they to be treated. First those who are immune and are not infected need no control. Carriers, or otherwise infected contacts, must be sought for and disinfected, or controlled.

Of course, the non immune contacts are the important ones, and these must be controlled and observed during a time, dating from the last exposure, covering the maximum period of incubation plus the prodromal period. The ideal way is to see each non immune contact each morning, or at least once each day. Sometimes inspection twice a day is desirable. It is by no means necessary that all such contacts be confined to the house. The danger in allowing adult wage earners to go to work is practically negligible except in certain occupations.

It appears from the foregoing discussion that what is needed is not more rigorous isolation, but the isolation of more persons. Indeed, many of the restrictions at present placed upon families afflicted with contagious disease might be very much lightened, though this cannot be done without very much more careful discriminating work by the health department officials. I am firmly convinced that this ought to be done, for it is certain that nothing so favours the concealment of mild cases and general antagonism to the health department as burdensome restrictions. As in maritime quarantine, so in home control, a seive is safer than a dam. The most stringent quarantine for the family of the patient which I ever saw was in a certain American city which I once visited during the height of an outbreak of diphtheria, and I never saw a greater prevalence of the disease, a prevalence which had been increasing while the restrictive measures were in force.

Of all health regulations perhaps none are more annoying to the family than the restrictions placed upon school attendance. I have often wondered if our restrictions are not unnecessarily stringent. If a constant supervision of the home is maintained would it not, on the whole, be better to let the immunes from infected homes attend school? This is now commonly done in measles, might it not be done in scarlet fever, diphtheria, mumps and whooping cough? It would, of course, be necessary that evidence be procured of a previous attack or that some biologic test be applied to determine immunity, as in diphtheria. As for German measles and chicken pox the less done with them the better.

One common health department regulation which is felt by those affected to be very onerous, but which really accomplishes little, is the hard and fast rule that the funerals of all who have died of contagious disease must be strictly limited to the family. This rule is not based on sound reasoning, but is merely a relic of the old-time theory that dead bodies breed disease. If the surviving family are all non-infectious, as can be determined in a large number of instances, the funeral may perfectly well be public and at the home, or in church, as preferred. Church funerals have been most objected to, but, really, they are the least dangerous. Much greater liberality in the regulation of funerals could safely be permitted with a little care on the part of the health officer, and it would teach people that the danger is from the quick and not from the dead.

If we are to have better results in the future from isolation and quarantine, it seems to me that our efforts should be directed to:

1. A more vigorous search for foci of infection.
2. A better supervision of cases and contacts.
3. Securing better co-operation by making restrictive measures as lenient and as effective as possible.

The Control and Treatment of Venereal Diseases

By Dr. J. K. McLeod.

The control and treatment of venereal diseases is one of the most important and perplexing problems with which the Health Department has to deal. It is important because of the unseen dangers of these diseases to individuals—individual families and communities. To individuals even when the disease is recognized and modern methods of treatment employed, even where improvement is marked, treatment is discontinued in so many cases, and only when too late the disease reappears in after years in a more aggravated and perhaps incurable form. To individual families, owing to the infectious and contagious nature of the disease it spreads from one to the other, even passing to the third and fourth generation. Where children are being nursed by hired help the danger is especially great. To communities where the disease is widespread, particularly in our larger cities, no one is safe. There is danger from help and guests in hotels, in restaurants, ice cream parlors, apartment houses, Pullman cars and, indeed, in all public places where common toilets, towels, bedding and dishes are used. In the Sydney clinic there have been treated ten cases, innocent, so far as becoming infected in an improper way.

It is a difficult problem, because the patient wishes to hide his affliction, and when consulting a physician exacts a promise of secrecy, making the information confidential, thus tying the hands of the doctor in attendance. It is true, the patient is numbered instead of named, which should make this information strictly private, but that is not always satisfactory to patient or doctor. Then a few of our medical health officers fail to report the cases to the Provincial Health Officer, thus establishing a channel through which the disease spreads without any trace coming to the notice of the officials who are authorized to deal with this important and difficult problem. In Sydney, where we have a population of 25,000, there were reported during the past few months, eleven cases—six of syphilis and five of gonorrhoea—four of these reported by

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Read at the Seventh Annual Meeting of the Association of Medical Health Officers and Conference of Public Health Nurses of Nova Scotia.

Dr. Hattie through the Provincial Health Department—five came to the clinic for treatment and were reported by me, and only two reported by the city physicians. This will give some idea of how imperfectly reports are made by city physicians. I presume the same condition of things exists in other centres. Notwithstanding the difficulty of controlling these diseases, there is very decided improvement. The public have been awakened and educated by moving pictures—literature, lectures and the establishment of clinics in important centres. It will be a long time before the full benefit of these measures can be estimated, but there can be no doubt that venereal diseases will be as well controlled in time as any other infectious and contagious diseases. How can this be best done? How can syphilis and gonorrhoea be best controlled and treated?

The governments of our country have done a very praiseworthy thing in providing free clinics for the treatment of cases of venereal diseases. In matters of this kind more or less economy must prevail, for the Great War through which we have just passed has laid financial burdens which are almost unbearable. Clinics are doing much good in making cases non-infective that would otherwise undoubtedly spread the disease. It seems to me, after a very short experience in clinical work of this kind that more effective measures must be adopted, if clinics are to be the success we hope for. At present, some cases attend clinics regularly—some irregularly—some discontinue treatment until a fresh outbreak occurs—some are never seen again after the first intravenous injection, especially if the reaction has been severe. I am not prepared to suggest a method that will meet all objections, but a follow-up plan might be adopted that will bring back to the clinic every case requiring treatment. In out of the way districts where patients cannot reach clinics, medical men might be given ampoules of 914 free. Education of the public through press, pulpit and literature is all important. Prompt report of all cases by medical men and treatment as speedily as possible, making every case non-effective.

Treatment of these cases is almost routine. Intravenous injection of some preparation of arsenic, followed by intramuscular injection of mercury in cases of syphilis. Potasperman or a preparation of silver salts in gonorrhoea. Before giving an intravenous injection, it is important to prepare the patient. My own method is very simple, and is as follows: A laxative, preferably magnesia sulp. the previous night, light diet the following day. Immediately after the injection the patient is made to lie down for a half hour or so, until all danger of reaction is over. In the preparation of the intravenous injection it is important also to have freshly distilled water, if possible, every day. In cases of reaction hypodermic of adrenalin, strychnine, camphorated oil or any other stimulant may be used.

If the Provincial Health Officer were enabled to procure the services of a specialist in venereal diseases from Boston, New York or some other centre to conduct a short course of two or three days in Halifax which medical directors could attend, I have no doubt good results would follow.

The Possibilities of a Heart Clinic in a Children's Hospital

ARTHUR M. GOULDING, B.A., M.D., *Assistant Physician, Hospital for Sick Children.*

ABOUT six months ago a heart clinic was started at the Hospital for Sick Children. We went over the records for the previous three years and picked out about fifty cases of carditis, acute or chronic, that had been under treatment in hospital during that time. Approximately half of these were located, and about one-third actually reported to the clinic. They served as a nucleus, to which we have added most of the recent cases discharged from hospital.

With most beginnings it is pleasanter and certainly easier to sketch the bright prospects of the future than to limit oneself to the rather unimpressive realities of the present. The number of cases so far treated has not been large; but it is of passing interest to record that no member of the cardiac clinic has as yet been readmitted to the hospital for treatment of carditis.

The object of this paper is to discuss the possible advantages of handling heart cases of the hospital out-patient class in one large group as a special clinic. The conventional way of taking cases as they come, to be under the care of whichever clinician happens to be available, has in many cases been satisfactory; but the fact remains that some physicians are both discouraged and bored with heart cases, and this point of view has its effect on the patient. Other places have been trying out the alternative method of special clinics to see where it leads, and we also hope to give it a fair trial here. In theory it seems to offer great opportunities; whether in practice these opportunities can be fully utilized is something we are now engaged in finding out.

The subject of heart disease falls naturally into three parts—Diagnosis, Prognosis and Treatment. The possible advantages offered by the heart clinic will be considered more or less in relation to each of these three parts.

Read at the meeting of Paediatric Section, Academy of Medicine, October 20th, 1921.

Diagnosis.—At the outset I should like to state my own belief in the old adage that "Two heads are better than one."

The difficulty of deciding whether a particular case has or has not heart disease has probably been noted at some time by everyone present. In a noisy and crowded out-patient department the difficulty is not lessened. It is a very present help to have someone at hand with whom the responsibility can be shared. It is sometimes of advantage even to the patient.

To pick up a heart murmur may or may not be easy—to decide its significance which is not the same as giving it a name—is not easy. To draw conclusions from the force, rate and rhythm of the heart beat in a youngster who is probably stiff with fright, is also neither easy nor wise. In fact, it is often impossible to get very much out of a first visit. Then comes the question of having the child return. To judge from the out-patient records, the cardiacs, or rather their parents, are extremely casual about returning to their own clinician on the required days. This is a trouble we are almost free from at the heart clinic. There is evidently something impressive to the parents in the consultations that take place over their children, for they very seldom fail to keep their appointments even when the case is doing well.

The routine adopted at the clinic is of the simplest, and includes merely the usual methods of heart examination that are so well known as to be often omitted. Some cases come to the clinic presenting both signs and symptoms, others present neither. Of the signs perhaps the most important is the size of the heart, and this is often quite hard to determine. It is also the rarest of signs to find recorded on the previous history. Light percussion of the heart borders is a fine art requiring constant practice, and one in which skill is likely to be developed more readily where the results are to be checked immediately and carefully by one's colleagues. The right border presents some difficulty; the large vessels more; and the lower left border of the heart presents most difficulty in percussion. The fluoroscopic report and the orthodiagram of the heart are available at the hospital X-ray department, although this court of last report is expensive either to the patient or to the hospital, and is not always necessary. The size having been determined and recorded, an estimate of rate, rhythm and character of the heart's action is next attempted. In children where the effect of the mental state on the heart is so great and so confusing, it is essential that the examination be not hurried. In the regular out-patient work it is difficult to spare the necessary time—in the clinic it is the routine. A case may have to be referred back several times before it feels sufficiently at home to allow its heart to act normally. A rate of 120 at one visit may be about 80 at the next. An exercise test is then tried to estimate the reserve force of the heart. We have so far been content to take the pulse rate before and after a stated test, noting the time required for a return to normal. The blood pressure readings as reported by May Wilson have not yet been tried out, but they offer a better indication of the general vascular reserve than does the pulse rate alone.

The other sign of importance is, of course, the presence or absence of a cardiac murmur—and it is in this connection that the clinic offers its greatest opportunities.

For every case that comes with symptoms of carditis, about five come, or are referred, because of a heart murmur. Our ideas regarding heart murmurs in adults were rather upset by army experience during the war. The same thing is happening in regard to murmurs heard in children.

The writers of text-books have sundry classification of heart murmurs—organic, functional and accidental—with their subdivisions all neatly tabulated. Some physicians have gone one better and divided murmurs merely into congenital and acquired, and have acted on their assumptions. That is, they have regarded the murmur as certain evidence of heart disease, and have assumed that the condition is permanent and probably progressive. They have discussed the question of heart disease with the parents, in the child's hearing, and a child of six can be miseducated into taking a very profoundly neurotic interest in his own case. The necessity of rest, the avoidance of all exposure and most exercise, the need of constant care, are all gone into most thoroughly, and the child is then left to grow up an invalid, surrounded by pitying relations, with the prospect of sudden death as the reward of any effort he might make. We have cases in our clinic, with hearts that are well up to their work, who came to us with a list of heart symptoms suggesting a terminal stage of organic disease; and yet these symptoms cleared up after a short course of commonsense and hygiene once the story book idea of heart disease and sudden death had been cleared out of patient's and parent's minds.

For the severe case of valvular heart disease approaching the terminal stage the clinic has little to offer, nor has in my opinion anything else. This may also be said of the occasional progressive pulmonary stenosis case that reaches hospital age.

For other cases, moderately severe and mild—cases varying from the simple regurgitation with plenty of reserve force, to the double mitral plus aortic, with very little, the clinic offers much. Such patients can be little helped by drug therapy, but they can be immeasurably benefited by decent hygiene, graduated exercises, and mental suggestion.

For the chorea or rheumatic fever case with no demonstrable heart lesion, the cardiac clinic offers nothing more than a series of functional tests following a careful examination, to determine the efficiency of the heart muscle. A single examination may show little, but it does give a standard by which the same heart may be judged on subsequent visits. Any dropping below this standard is a fairly clear indication for treatment. The only advantages of the heart clinic over the regular out-patient routine are the relative quiet in which the examination can be made and the fact that patients are a little more apt to return to any special clinic than they are to the regular medical out-patient department. Furthermore, the records of the heart clinic, as regards the heart findings, are a trifle less sketchy than those of the general out-patient, and they are therefore of some slight use for subsequent comparisons.

Prognosis.—The prognosis of heart disease is to a large extent an unknown quantity. Most of the guess work that has been done has included in its results the various degenerative lesions of adult life as well as the congenital malformations of infancy. Both these groups of cases give an undue pessimism to the conclusions drawn. It is known in general that as regards children the earlier the age of onset the better will be the established compensation and the adaptability of the child to the heart's capacity. The whole prognosis question *then* rests on the prevention of further heart infection, and the prevention of infection consists for the most part in the building up of the general resistance. The malnutrition clinic has shown what can be accomplished in this respect by careful and constant supervision; we hope to be able to show similar results. For adequate prognosis we need to study a large series of records that represent more or less comparable methods of treatment. The regular hospital records show such a wide diversity of methods and such a cautious absence of conclusions that it is hard to get much from them. The records of the heart clinic should in time produce reliable data from which sound conclusions may be drawn. On this ground alone the clinic should justify its existence. If, further, it should succeed in dispelling a little of the gloom which now surrounds the question of prognosis in heart disease we shall feel more than satisfied. After all, from 1 per cent. to 2 per cent. of the entire population have heart defects, and yet they carry on for the most part without troubling the medical profession at all.

Treatment.—Treatment for most cardiac children at present consists too largely of rest and digitalis, in varying amounts. As to the use of digitalis in carditis—we are still waiting for convincing reports of its efficacy. Sutherland claims good results in cases with a temperature under 100°, but he uses it in heroic doses that few people have the moral courage to attempt. From our own experience it would seem as though digitalis were without any effect—except for an undesirable one on the digestion. That leaves rest as about the only adequate treatment for acute carditis—and rest means not a week or two in and out of bed, but a period of three, six or even twelve months without setting foot to the floor. Such treatment is impossible in the home of the average hospital case. It is almost impossible in a general hospital, yet it may mean all the difference in the end between a normal child and a cardiac cripple. What we need, and what the clinic hopes some day to achieve, is a small heart hospital after the manner of the Longwood Hospital in Boston, where "first attack" cases may be taken and kept just as long as their condition requires. It is almost hopeless for the individual physician to achieve much in this line, but for a heart clinic, with a large clientele, to put its case before the public, should be productive of the desired result. In a democratic age nothing useful gets done unless a large number of people with votes can be enlisted on its behalf.

In treating the chronic heart case those in charge of the clinic try to remember that they are dealing with a condition and not with a disease. It is true the disease may recur at any time, and a reinfection, miscalled a break in compensation, may put the case back into the carditis group requiring hospital treatment. For the most part, however, we are dealing with a cripple who is normal except for the heart condition. I admit that this description does not apply to many of the mental and physical wrecks we now class as cardiacs, but it should apply to them, and I believe that if they can be properly re-educated and trained it will so apply.

Re-education and training are two things that a heart clinic has to offer the chronic case; but they must build on a foundation established by hygiene.

Hygiene and commonsense are often absent in the homes of cardiacs. Parents seem to fluctuate on the one hand between an exaggerated anxiety which results in too much rest in bed, no fresh air, and plenty of ill-chosen food; and on the other hand, in a spirit of benevolent fatalism—a natural reaction from the first state of mind, which allows the child to do just about what he likes—to keep any hours, to have meals at any time—to stay up till midnight and get up at noon, and in general to run things at his own sweet will. There are a fair number of households that are being turned upside down in the supposed interests of a young cardiac patient. Of course, a normal child seldom thrives under such conditions, and a cardiac never. A simple routine which includes a rest after dinner and a reasonably early bed-time will often work wonders in a month. Correcting the diet, of course, also helps—for the heart needs food more than any other organ, and if the whole body is undernourished the heart muscle also suffers.

The use of moderate exercise up to the limit of tolerance is another essential of treatment, and this requires that the effect of exercise be carefully checked at frequent intervals and over a long period of time. The number of cardiacs with perfectly good tolerance who are barred even from the simple setting up exercises of school is very large. Some are even kept at home because there are stairs to climb at school—the room at "home" being often two or three flights up from the street. Many of these cases have been so long without exercise and are in such poor training, that the exercises must be worked up gradually. Such patients are very much helped and stimulated by meeting other children, previously in the same condition as themselves, who are now able to take part not only in the regular school exercises, but in many of the games as well. The size of a heart and the sounds that it makes are very unreliable guides in estimating its capacity for work. "Prove all things" is advice which very clearly applies to the handling of heart conditions. More young cardiacs suffer from a lack of exercise than from an excess of it.

Re-education means changing the cardiac's point of view. Too many children are ready to lie down on their job, to drop behind in school, to shun their fellows and to develop into neurasthenic recluses, giving as an excuse their heart condition. To get such a case into the clinic with other children physically as badly off as himself, who are, nevertheless, doing as well as others of their age, gives him a new viewpoint of the very greatest value. The Christian Scientists can teach us a lot in this respect, and the lesson is worth learning. Childhood, as you know, is the time when suggestion brings the greatest results—especially if suggestion can be reinforced by example. Instead of allowing the patient to mope about waiting till he "gets better" before living up to his duties, we can see to it that he starts in at once, both physically and mentally, and works up to the limit of his tolerance, increasing this limit as far as it can safely go. The one prerequisite to this desirable end is that the child should have his mind cleared of the anxieties and the bad physiology that the name Heart Disease has instilled into the laity. Make him see that his chances of life are good enough to warrant the effort for improvement, and the effort will be made.

The training of cardiac groups must include both physical exercise and educational and vocational work. Both could be better done under one roof. Special classes for cardiacs are still in the future. So far we have been using the Forest School wherever possible, and the improvement in many cases has been striking. One of the great factors in this improvement is the two-hour rest period following the mid-day meal. Another has been the short setting up exercises at intervals. A third has been the absence of the ultra normal child, who is usually rather a callous little animal, and whose competition is a bit discouraging to the handicapped cardiac patient.

The report of Halsey, early this year, on two groups of cardiac children, is of great interest. One group was treated in a special class, and given also hygienic supervision throughout the school year. The control group carried on under the conditions that exist in the average school. Twenty-four cases in each group. Of the special group 21 did not lose a day's schooling, 1 had pneumonia, 1 broke a leg, and 1 congenital cardiac died. Of the 24 controls, 6 spent an average of 2 months in hospital, 10 had frequent slight ailments, and the eight who did fairly well gained an average of 2 lbs. in the year, as against an average of 9 lbs. in the special class. The advantages of this special class included a lunch and rest period at the noon hour, quiet play from 3 to 5 p.m., no stairs to climb, and a motor car for transportation. Of these four advantages we should be able to provide at least the first three.

Introduction to the Study of Social Hygiene

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SOCIAL hygiene in its widest sense is the health of a community. That is, of a group of people so bound together that the welfare of one must in the long run affect and be affected by the welfare of others, and of the whole group. We are coming more and more to realize that this is the very nature of a community, as indeed the name implies. Social hygiene is in this sense a healthy state of all the conditions of life in society. How far such a state is realized depends on two factors—the individual and the environment in which he is bound by all the intricate web of circumstance. And all study with a view to the cure and prevention of unhealthy states calls, in varying degree, for consideration of these factors.

In all social ills, the trouble arises from the failure in the balance of these factors. Every man is a new combination of hereditary elements, which are destined to develop in reaction upon whatever environment falls to his lot. His instinctive impulses are modified at every point, in their search for satisfaction in the limits of their environment. By common agreement the term "social hygiene" is used in one special case of this inevitable condition—the sex instinct. It is a universal and very moving case, in which the urgent impulse for self-expression finds itself in conflict with the restrictive conditions of organized society.

We must realize at the outset that this very conflict is the source of social good as well as of social evil. Only so shall we keep our perspective. The hindrance to easy satisfaction has called out adaptations of countless kinds, through which the sex-impulse irradiates with warmth and colour more manifestations of our life than is commonly suspected. It is an instinct whose transfiguration is one of the glories of our civilization: whose repression is one of the dangers, and whose perversion is part of the shame.

The problem of the fulfilment of the sex instinct would be in any case a difficult one for individual happiness and social welfare: so manifold are the varieties of personality, and so various the stresses between personality and environment. But the occurrence

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of disease as a result of its mismanagement makes the problem acute. It is easy to dwell too much on the pathology of what is after all a moral issue; but disease is a more sizeable problem, it can be fairly easily isolated, studied and treated. We must for this purpose set aside all shame in the symptoms, and attribution of guilt. Such a candid recognition of the objective side will greatly help doctors and hygienists in their most difficult task. The venereal thus fall, with others, into the category of contagious diseases, and offer the same challenge.

Some of the diseases from which man suffers are carried from person to person, either by actual touch or by contact with some common medium. They are called contagious, or infectious. They vary very much in severity, but are specially dangerous because of the ease with which they spread, and the difficulty of avoiding contagion or infection. That is why many of them come in epidemics, which threaten the health of whole communities and the lives of many individuals. They seem to come in great cycles, often in changing forms, increasing or abating in violence owing to causes still obscure. But scientific knowledge in sanitation and medicine has been applied in recent years with increasing power, to the attack on their causes. This has been done by minute research into the symptoms, by tireless and skilful experiment on means to destroy the cause, and to prevent infection. Much progress has been made in limiting the ravages of many such diseases, with a consequent raising of the normal standard of health, and lengthening of the average span of life.

The diseases of this class which call for reduction to-day, such as typhus, tuberculosis, and the venereal diseases, syphilis and gonorrhoea, lay on mankind a very heavy burden of misery, inefficiency, sickness and death. They constitute the greatest problem of public health before the world to-day. Yet the knowledge so far gained, and increasing every day, warrants us in saying that the burden can be lightened, and the problem largely solved; though the solution involves a very far-reaching interpretation of the conception of hygiene. To an extent as yet unknown they may be classed as preventable, and would almost certainly disappear if the conditions of life were such as are known to be favourable to health and unfavourable to the destructive organisms which prey on its weakness.

From the point of view of sanitation and medicine these contagious infections are essentially of the same character. Their symptoms are due to the presence of some germ, which in its own way destroys the bodily structures which it is its nature to attack and upon whose destruction it thrives. The hope of cure is the same in them all—the discovery and destruction of the specific germ. Accurate diagnosis is very modern in the long history of man, and has been made possible by the use of the microscope. Effective treatment follows accurate diagnosis, and is made possible more by the ever-increasing knowledge of bodily structure, and of chemistry. Exact definition only began to be possible after 1879, when the germ of gonorrhoea was discovered, and 1905 with the discovery of that of syphilis.

So far as the history can be made out, syphilis seems to have made its first appearance in Europe at the end of the 15th century, when it raged as one of the most terrible of long and black series of plagues. It was apparently brought from Haiti by the sailors of Columbus; in any case, it found new blood unprepared by a syphilitic past to defend itself, and it ravaged every population it touched, just as it has done in more modern times when sailors have taken the fatal gift to uninfected races. After the epidemic had exhausted its first violence, and began to meet more resistance in the inoculated survivors, it settled down into obscurer and less rapidly fatal ways, working itself, as gonorrhoea had already done coming from a practically unknown past, deeper and deeper into the recesses of the body and the processes of life. That is the situation to-day. However serious may be their more obvious symptoms, and their complications (so peculiarly ghastly in the case of syphilis), their special horror lies in the fact that they attack the very springs of life. They not only cause miserable disorder in the minds and bodies of the directly infected unless by prompt, patient and skillful treatment they are cured; but they limit the number, and spoil the life-chances of the children whom they allow infected parents to bring to birth. It is sober literal fact that they are not only in the front line of killing diseases, but are poisoning the race.

With increased accuracy of diagnosis it is possible to form some idea of their prevalence. The figures quoted are merely illustrative. It must be remembered that there is no count of the cases latent, unrecognized, or unreported; and that frequently the true cause, while known, is not revealed; also that, while some discount may have to be made in applying medical figures to a whole population (owing to the morbid character of medical experience), yet it is easy to rate this discount too high; and the more searching the test the higher the figures. Even with these qualifications, all examinations agree in showing a high prevalence; e.g., of over 25,000 cases of infectious diseases reported in New York from July 4 to Oct. 3, 1915, 28% were syphilitic, while tuberculosis showed 21%, diphtheria and measles 13% each. Military figures are now available in large numbers; they confirm the usual estimate for syphilitic infection among the adult males of a population such as ours at from 10% to 13%. Among hospital patients it ranges from 10% to 20% (routine blood tests of nearly 1,000 in Toronto General in 1916 showed 12.8%.) A Toronto orphans' home showed 17.5%. Among criminals and the insane the range is higher still, 20% to 40%.

Gonorrhoea is from 4 to 5 times more prevalent even than syphilis; and, while less obviously serious in men, and less prevalent in women than in men, is raised to a terrible eminence by its effects on women. To prove this, very few figures will suffice. Out of 329 operations in the women's wards in the Toronto General in 1915, 40 were for the relief of conditions directly due to gonorrheal infection; of major operations the proportion was 25%. (These figures take no account of those who recover without operation.) Of the 40, 28 were married and 12 single; the married in nearly every case innocent victims of an infected husband. The latter, too, were in many cases innocent to extent that they believed themselves to be no longer infective. Had they been placed under a proper system of treatment and control, and warned of the danger of their condition, their wives would have escaped and a happy family life been made possible. If she recover it is often to lead the life of an invalid, or to submit to an extensive and mutilating operation which makes childbearing impossible. Apart from these severe complications, sterility often results from milder attacks. Probably 50% of all cases of female sterility are directly the result of gonorrheal infection. The disease often assumes a latent form in which treatment is difficult. When an infected mother does bear a child it runs a great risk of being blind; 40% of all blindness are due to this cause.

Another result of this latent habit of gonorrhoea is that the spread of contagion from the individual woman is very much greater than from the individual man. Practically all prostitutes are infected at some time. Of 466 girls in the Bedford Reformatory 10.7% were free, 86.7% had gonorrhoea, 54.4% syphilis, and 36.4% had both. The chances of ultimate infection for the habitual user of prostitutes are very large, and the chances of escape very small. (It must be remembered that there is no reference to irregular attachments, which may be of any degree of fidelity.) And it is not only the open professional who is a distributing centre of infection. Recent inquiries show that the use of the amateur or occasional prostitute is responsible for a very large percentage. She is indeed especially dangerous; she carries infection from men who make prostitution a practice, to those who only occasionally lose their self-control and self-respect. She is more attractive to the decenter sort, whose perceptions and tastes have been well-bred and not been calloused. There is likely to be genuine sex-attraction on both sides, and she may not be skilled in self-protection. Her activities seldom or never disturb the public peace and so remain hidden. The same is true of the high class houses used by the vicious rich. They may be kept clean for a time, but as vice inevitably tends to lower itself and blunt its sensibilities, it is certain to be infected sooner or later, with tragic results.

So far we have seen the urgent need of opening our eyes to the grievousness and prevalence of venereal disease as a problem of public health, to be met, exactly as other infections, by the proper scientific method. All infectious diseases may be classed as preventable, however imperfect the prevention may be at present. They are all greatly increased by bad living conditions and by ignorance. The final victory over them lies with a high standard of living, and a high standard of knowledge and intelligence.

In these respects they are all the same. The difference is that the root of venereal infection springs from a human passion, a human desire, a human pleasure. It is the only case of an infection where there is a prize that makes the risk seem worth running, by heated passion or cold calculation. There is no traffic in other sources of infection. But the provision of sources of venereal infection is an active, enterprising and lucrative business because it exploits a universal desire. If this desire could be satisfied normally, and its excess transformed into other channels of pleasurable energy, the stream of infection could be stopped, and the disease in time eradicated. The failure of the individual to control the instincts, the failure of society to provide a healthy life for all its members—these are the predisposing conditions which in the last analysis face the social hygienist.

It seems at first sight a hopeless task to change these conditions appreciably, and, indeed, it is a long one. But any short cuts that neglect them can at best win little ground, and are likely to do more harm than good. For example, those who accept the promiscuous use of prostitutes as an essential factor of civilization, as soon as they realize its dangers, turn to regulation as a remedy. Let us have licensed houses, or a district, and have the women periodically inspected, and the infected one removed. This pathetically practical measure has broken down everywhere, as it was bound to do. We need only note a few of the objections. The women get their infection from the men who use them, and may be infected within an hour of the inspection which guarantees them safe; they may then spread disease till the next inspection, when, if they are detected, they are removed (where?) to make room for one as yet clean. Meanwhile, the uninspected, uncondemned man may not only infect fresh prostitutes, but carry the poison into his home. It was indeed, whether explicitly or not, to make indulgence safe, that regulation was tried. It never had a chance of success, except in small comparatively isolated places governed autocratically; and any chance it might have had has been destroyed in most places by the telephone and the automobile. But graver than the objection of failure is this, that it recognizes the obligation of the state to provide a succession of "safe" victims for male appetite.

Similar objections apply to the periodical clean-up, which involves a helpless, unjust and degrading mixture of toleration and repression. The law is invoked in other ways. On the abomination of the traffic in women all are agreed, except those who need a constant supply for their greed or pleasure. There is a body of agreement less complete against the brothel, and the "injunction and abatement" legislation makes the owner of such properties liable. In all measures of this type it is the public "peace" that is guarded against "nuisance" and "disorder." These are standards crude in themselves, applied only to the most obvious symptoms of a deep rooted trouble; they neither rise from nor lead to any hope of a better state of things. Usually they are enforced by men who, however good they may be themselves, live in the atmosphere of the base old tradition of one-sided, rough-handed repression, are inured to the existence of vice, so that they simply cannot approach its manifold instances with the fresh eyes of untiring justice and pity. It has become a stereotyped and pretty hopeless business, and their hand is "subdued to that it works in"—an unreal world of law and order in which the real issue seldom appears. It is true that their system must be judged partly on its effect in checking disorder; but the ultimate judgment must be far more deeply based. We must look into its effect on those whose conduct it regulates, and on the growing mind of the community to grapple fundamentally with its problems, to recognize the common responsibilities, and raise the common standard of life.

The same criteria apply in more enlightened controversies, to which only the briefest reference can be made. Such are, penalization of the infector, prophylaxis, compulsory notification, raising the age of consent; on all of which the fullest knowledge and discussion is necessary.

It will also help in clearing opinion on the moral and legal issues involved—the limits, at any period, of legal repression of vice. Very briefly, laws are effective when they put into force standards of conduct approved by the moral sense of the majority, or of a dominant minority. In a community which approaches democracy, a law which fails of this condition either becomes a dead letter, or ranges against itself some even of the moral forces. The development of a widespread moral sense—the result of education in its widest meaning—is thus antecedent to law. It is a nice point to decide just when public opinion is prepared to back a law designed to enforce a higher moral standard; and a very important point, because the failure of that backing will inevitably cause reaction. On the other hand, if the law is right in its moment and method, it becomes itself an educative force, and wins over more and more of the minority, till it is reduced to the recalcitrants against whom it must be enforced.

A campaign for medical treatment and preventive education is free from this difficulty, and is not committed to any delicate calculation of guilt and punishment. It works for the guilty and the innocent (both alike pitiful) for their own sake and for that of society. All hygienists are, I think, agreed on these modes of attack in principle, if not in detail; and they can count on solid public support when once the case is realized, for

(*a*) Early and free treatment of disease;

(*b*) Spread of knowledge of the hygiene of sex.

The utmost resources of science must be used to reduce the amount of actually existing disease, and to prevent as much as possible of its results calamitous to mind, body and character.

The utmost resources of educational institutions of every type must be used to build up character, on a firm basis of knowledge and self-control.

The result of these two converging lines will be to build up a public opinion capable of forming a wise policy founded on knowledge and sympathy. This will use its full force to protect the weak, and assign its proper function to the criminal law, of dealing drastically with those who break its express formulation of so much of the moral sense of the community as has been worked out into legislation.

The real problem is how to increase moral strength, and fortify moral weakness. We vary sexually between the extremes of frigidity and inflammability, and from iron self-control to utter suggestibility. We vary again in the help or hindrance of our circumstances. We all have our breaking point, and it is well never to forget that there is much respectability whose virtue has never been sorely tried. The normal sex life in the civilization in which we live is hedged about with sanctions social, religious and legal, which have a powerful function in protecting the virtue of those who are supported by its conventions, inspired by its ideals, or regimented by its punishments. There is need for reconsideration of the case of those whom circumstances deprive of these protecting influences. And there is need (e.g. in the relative responsibility of men and women) for a revaluation of the quality of virtue. Perhaps the insecure control of an unruly instinct is an unconscious cause of the panicky state of mind in which many good people approach, if they cannot avoid, this group of questions; and partly accounts for the unjust violence of so much repressive legislation. It is because they, too, are instinctive, that condemnation is so much easier than understanding, and punishment than cure. In all such discussions the guiding principle must be the physical and moral renovation of the individual and of society.

With the absence of protective influences goes the active counter-influence. Consider the disruptive force of poverty; or bad housing; lack of recreation; casual employment; migratory labour; delayed marriage (especially when accompanied by lack of decent home atmosphere), enforced celibacy (unsupported by high ideals or vows of chastity); weary, monotonous work; idle boredom; the outlawry of the unmarried mother and the illegitimate child; drink, that loosens self-control, inflames passion, abolishes decency, and nullifies knowledge. Such are the circumstances which mould the characters and guide the destinies of too many in our society. Their betterment is the object of all social reform, and any progress in any of these directions is a fundamental contribution to the solution of the problem we are considering.

The same applies to that deliberate moulding of character which we call education. What is the nature of this person for whose development education tries (at least ideally) to provide the best opportunities? There is nothing more certain about all living beings than that they inherit a number of instincts. That is, they will, as sure as they live, be impelled to notice a certain range of things, and feel, and act, a certain way about them. These impulses will be stronger or weaker; they will take forms welcome or unwelcome; they will be encouraged or repressed under the influences of home, school and community; but they are part of the original outfit of every human being, and impel it to fulfil its life and seek its satisfaction.

It is equally certain that they have to work themselves out in the circumstances in which the life is lived. "Life" is, in fact, the sum of the activities by which the instincts express themselves in reaction to the conditions in which they develop. From its first beginning, the whole living being grows by absorbing into itself the material of its surroundings. This is as true mentally as physically; as true of man as of the germ of infection. Even these lowest organisms "select" the elements they need for their life. But the mind of man exercises an increasingly conscious choice, which joins with the force of circumstances to limit, modify, encourage or repress, the free expression of the instincts. The series of choices builds up habits which, becoming rapidly fixed, become powerful controllers of conduct. As growth proceeds the choice becomes more conscious, more based on deliberation and judgment, more enforced by will. All influences, inner and outer, combine to affect conduct, which is indeed the resultant of their conflict and co-operation.

Such, then, is the foundation of character—the instinctive and habitual material on which personal control and social education is exercised. It is, as we have seen, threefold in expression. It *recognizes* certain things, which excite certain *feelings*, which issue in certain *actions*. The instincts, restlessly and inevitably seeking outlet in acts destined by repetition to become habitual, can be guided on each of these levels towards a stable and social self-fulfilment. That is the problem of education. The first level is that of knowledge—to learn to recognize the thing of real value. The second is that of the refinement and purification of the feelings. The third is that of healthy activity. This threefold ideal is the only practical basis on which educational systems can build up good individuals, and through them a common mind co-operative for the common good.

To sum up the specific problem of the fulfilment of the sex instinct, the following principles emerge from our study.

First.—We recognize the manifold effort of a universal instinct to fulfil itself in surroundings which modify it endlessly, for good and evil; the latter resulting in disease of character, mind and body in uncounted forms. We must study the different strains and breaking-points in the stress of adaptation between individual and environment. This study of the conditions of life in society will probably show them to be unsatisfactory on other grounds, as well as aggravations of this particular problem. Society must reduce the conditions which make against decent living, and strengthen all that makes for a higher standard.

Second.—The presence of disease makes the matter extremely urgent; but requires that the disease must be discussed and treated as such, as a medical problem to be attacked by scientific methods.

Third.—Legislation for repression must be based on accurate knowledge and still more, on absolute justice. While not neglecting the differences between man and woman, we must emphasize their common humanity, their common fate, and their joint responsibility in lightening the scourge, as well as their common challenge to work up to a nobler standard.

Finally.—The control of the situation in the last resort rests on the formation of the best types of character in the greatest number of individuals, and the progressive embodiment of their ideals in the institutions of society.

The Duty of the State to the Unmarried Mother and Her Child

JOSEPH N. NATHANSON, M.D., C.M., Ottawa, Ont.

THERE is no greater problem from the standpoint of racial development and national importance than that of illegitimacy. Nevertheless, the usual interest manifested in this most important aspect of national life may truly be said to be in inverse proportion to its seriousness and resultant ill-effects. The purpose, therefore, of this paper is to bring to light some of the more important aspects of the question, and to offer suggestions, in which to the writer, appear to lie at least a partial solution of the problem.

Taking only one of the provinces of the Dominion as an example, namely, Ontario, one is staggered by the number of registered illegitimate births. The truth of these figures can certainly be questioned, for it must be conceded by even the most conservative, that the reported cases are much smaller than the actual number of illegitimate births. In a review of the subject the writer has found that for the years 1912 to 1919, inclusive, the total number of illegitimate births registered in the Province of Ontario reached the large number of ten thousand seven hundred and eighty-four. When compared to the total number of births registered for the corresponding period, viz.: five hundred and twelve thousand and thirteen, it is found that 2.1 per cent. were registered as illegitimate. Taking, therefore, a twenty-year generation, we have born in one province alone, between forty and fifty thousand illegitimate children.

That is, of course, a most conservative figure insofar as it is based upon registered births only, and emphasizes also what a tremendously important national problem we are dealing with when applied to the country at large.

When we study the question of general infant mortality rate for Ontario for the reported years, we find that the numbers vary from 103.2 for the year 1914 to 95.5 for 1919. In themselves, these figures are even too high, but, were statistics available, it is certain that one would find that the infant mortality rate for those children born out of wedlock would be very much higher, perhaps twice if not three times as high. In other words, this means that about one-quarter of the infants born out of wedlock die before they reach the first year of life. The chief cause, of course, for this high infant mortality rate depends primarily on the usual separation between baby and mother, and secondarily to the lack of proper care usually given to these infants.

In the light of the above findings, we are naturally concerned with the provisions made by any community for the expectant mother, out of wedlock, both before and after delivery. Notwithstanding our claim on this side of the Atlantic, that our standardization of hospitals, our technique in obstetrics, and other branches of medicine are progressing commensurate with the times, we are, much to our discredit, behind the older and more conservative countries of continental Europe.

France and the Scandinavian countries have for some time recognized that any agencies other than those which vest the control of illegitimacy in the hands of the state, are inadequate and utterly barren of complete success. In the Scandinavian countries once paternity is established, the law grants the child the right of legitimacy, and its father must support it until it is in position to earn a living for itself. In France, on the other hand if a child is illegitimate it is not even legal to declare or claim its father without his permission; but the state, if deemed necessary or advisable, becomes its foster parents and undertakes the task of rearing it without want and under constant and adequate state supervision. In addition, the child is taught a useful trade, and it is regarded as the legitimate child of its foster parents by the state officials. Compare these broadminded and humanitarian provisions to the inadequate and lacking interest which we exhibit in the illegitimate child. Save for an occasional manifestation of philanthropy undertaken by private individuals our interest in the whole question is really a hypocritical one. How often we hear protests both from the pulpit and press against the high incidence of immorality, but without any attempt whatsoever, even to the smallest degree of systematically combating the evil and its unavoidable results, whether it be by providing for the unfortunate mother or her innocent child.

The economic aspect of the problem is certainly not devoid of importance and interest. Assuming that the unfortunate child becomes a good citizen, then perhaps the state has no direct burden; but, as is more often the case, should he grow up as a useless citizen, he becomes a natural burden, whether it be along the routes of criminality, prostitution, insanity, venereal diseases or otherwise.

It is not without the bounds of logic to assume that an illegitimate child who is neglected will show a greater tendency to deviate from the virtuous path, and it is self-evident that neglected women who give birth to children out of wedlock, form the "grand army" of prostitutes and the incubators of venereal diseases. How much of an expense this class of the community is to the state, can only be estimated in terms of many millions of dollars per year.

Having emphasized the bigness of the problem of illegitimacy, let us now devote our attention to a discussion of those means which would give the best results, both from the standpoint of the individuals affected and the state as a whole. From the outset it must be reiterated, and with emphasis, that any measures other than those which give the state full and absolute control of the whole problem are unsatisfactory and inadequate to deal systematically with such a gigantic problem. Assuming, therefore, that legislation could be obtained for state supervision and control, what necessary measures would be required for its successful administration?

Primarily, in the opinion of the writer, the various provincial governments should establish central provincial bodies, to which should be entrusted the administration of the whole question, and it should be made compulsory by law, for any female if she become pregnant out of wedlock, to apply to such a body for advice, aid or other necessary adjuncts. Further it should also be compulsory for every unmarried mother to be delivered in a properly equipped maternity hospital where she could obtain the necessary prenatal care and advice, and she should be forced to attend such a clinic throughout her pregnancy, subject to the advice of the physicians conducting this clinic. Again, all those females who become illegitimately pregnant, should be carefully examined and graded from the standpoint of mental efficiency. If she should be found to be deficient, then, of course, she should be sent to an institution for the feebleminded, and thus preclude the possibility of her becoming pregnant in the future.

If, on the other hand, she possesses a reasonable degree of mental efficiency, then the province should hold her under its supervision for a year or thereabouts, during which period she should be forced to report with the child, from time to time, in order that the health of both may be kept at a normal level, and in that way reduce the infant mortality rate. At the end of this period, if the mother is financially able to rear the child, then she should be given custody of it, but still under state supervision until such time as it is in a position to earn its own living. If, on the other hand, the mother is unwilling or unfit to raise the child, as would be the case of the feebleminded, then the province should become its foster-parents, educate the child, and teach it a useful trade as it grows older. Finally, from the standpoint of the child, the stigma of illegitimacy should be erased and the unfortunate child legitimized, in order that it shall not suffer innocently as it grows older, on account of the iniquities of its parents.

Social Background

Legal Aid For The Poor

MISS FRIEDA HELD, *Neighbourhood Workers' Association, Toronto.*

FREEDOM and equality of justice to every man is the basis on which the plan for the administration of justice is built. But on examination we find that there are grave defects in the machinery for administration of the law, that justice is not impartial; rich and poor do not stand on an equality before the law for the poor are denied access to the law owing to their inability to pay the costs necessary to secure justice. It is this wide disparity between the ability of the rich and poor to utilize the machinery of the law which justifies the remark, "There is one law for the rich and another for the poor." With the changes that have taken place in the nation's life due to the growth of urban population, the rise of the working class, immigration, etc., the law has become highly complicated that in its administration it is necessary to engage counsel for advice or litigation purposes. Herein lies the greatest difficulty for the poor. Often the problem can be successfully settled out of court if those involved had the knowledge and advice necessary. But legal advice is costly and because of the inability of the poor to meet this cost their wrongs are not righted, and the poor man is dissatisfied because the justice which is rightly his is denied him. The purpose of a legal aid organization is to overcome this very difficulty. Its aim is to render legal aid gratuitously if necessary to all who need it and who are unable to procure assistance elsewhere. There is no doubt that if a survey were made among the social organizations in Toronto for definite cases where legal aid was necessary and a solution of the family's problem, many legal injustices of which we are at present ignorant, would be brought to light. Isolated cases are brought to one's attention in one's own particular sphere, but to what extent such a wrong is prevalent is unknown. I think of one case brought to my knowledge during this period of unemployment.

A workingman secured a job to go to the bush 45 miles north of Massey. He obtained the job through a private employment agency, for which he paid $1 and signed an agreement that if he stayed on the job three months his railway fare would be paid both ways. On arriving at Massey they found they had to tramp 45 miles to the bush. At intervals of 10 miles there were rest stations belonging to the company where they could rest and obtain food for which they were charged $1.25. Of the group of about 25 who went with the man, not one stayed three months, some were dismissed within a week as not being competent; others were laid off at various periods because there was not enough work to keep them busy. The man who told the story was there the longest which was seven weeks. They had to tramp back to Massey—if they had enough to pay their fare to Toronto, they did so. As they were coming back they met others going out to the bush. The point is that apparently there was no intention of keeping the men there three months, but was a scheme of getting work done in the bush cheaply, of getting the men to spend their money in the company's rest stations—contract broken. I asked the man why the matter could not be brought to court. His reply was, "What can you do—courts cost money—a poor man can't do anything in a case like that. We simply chance, because sometimes the thing does turn out better and you are able to fill the contract."

If there were a special organization for giving legal assistance in such a case it is probable that many such cases would be brought to the attention of the department and definite assistance to right these wrongs could be given.

Social organizations in their daily work with individuals and families are constantly finding situations that call for legal advice and assistance. It may be a knowledge of a bailiff's rights after a bailiff's notice has been served upon a tenant in arrears; what is the attitude of the law in regard to people in arrears with payments for goods bought on the installment plan. What is the law in regard to non-support—what is the law with regard to the legal adoption of children, etc.

Recently a woman was put to a great deal of expense and worry because the persons to whom she applied for legal advice either did not know the law or were careless in their interpretation.

The woman kept a rooming house—a room of which was rented to a supposed married couple. Later it was discovered that the man and woman were not married. The man had a wife and children in Montreal. The man was brought to court in Toronto for non-support of his wife, and while out on bail he and the woman he was living with left the woman's rooming house, also a debt of $60 or $70 for rent. Left goods behind. Woman applied at the City Hall to see if she could sell goods for rent—was told that if she inserted an advertisement in the paper for three days, and they were not claimed, she could sell. This she did, and sold the goods to a second-hand dealer. Later the tenant appeared for her goods. She was told they were sold, and immediately laid a charge against the woman for selling her property. The woman had to appear at the Morality Department, was told she could be arrested for stealing—but was given the chance to get the goods back from the second-hand dealer. Unfortunately the second-hand dealer had already disposed of some of the goods, and the woman had to go to each of these persons and get back as many of the goods as she could and pay the woman for those she could not recover. The law states that six months must elapse before goods left can be sold and then after three days' notice.

The social worker needs in such cases prompt, accurate and expert advice. As the social worker diagnoses her cases more thoroughly so this brings to the surface the existence of situations calling for legal action, which, in former years, when material relief was generally believed to be the solution of a family problem, was passed over. In the endeavour to secure adequate legal advice the plan at present adopted is the volunteer counsel, that is social workers apply to lawyers known to them for instruction on points of the law in a case in question. Defects in this plan are very apparent. Lawyers are busy men—social workers may feel disinclined to bother such men with what may seem petty questions. Often the difficulty is an involved one, and the legal advice given is not as much as the social workers need. Moreover, the social work suffers because it is not the lawyer's first business to care for such cases. Most lawyers work under pressure, and when a choice has to be made between the firm's business and the social case, it is natural that the former should receive precedence. Finally, this volunteer plan is not calculated to procure accurate advice, for the simple reason that the law is now so vast that no one man knows it all or can keep pace with its growth. Specialization has taken place in law as well as in other professions, and many lawyers are more versed in the law dealing with corporations, banking, property than in the legal problems that affect the poor. Many of the cases that come to social workers from the poor are in the by-ways of the law in which most lawyers are not expert, and about which they know very little. A legal aid department would be dealing with such matters over and over again. Its specialty would be a knowledge of the law on problems peculiar to the poor.

Legal aid work of an informal, inorganized, individual sort has always existed, but what is needed, as one great solution in the inherent difficulty of the expense of counsel, is organized legal aid work. In the light of modern development this means the furnishing of lawyers in cases where lawyers are necessary if justice is to be done, and where no other agency, as the state or court provides the attorney's or persons to perform the attorneys' functions. This organized legal aid work may be done through a corporation or a voluntary association or a department of a larger social organization, but there will be something more than individual effort; there must be some elements of association, combination and co-operation through which are secured continuity and permanence. Organized legal assistance to the poor is not so much giving something to the poor as it is obtaining their just dues—it is not dispensing charity, it is securing justice.

Since the securing of justice is the purpose for which legal aid to the poor is advocated no moral standard can be erected which applicants must satisfy before being entitled to assistance. The only test is the intrinsic merit of the claim and the inability of the applicant to engage his own counsel. In a domestic tangle where children were involved the morality of both or either parents would need to be considered. In such a case the moral test becomes the legal test.

While the purpose of organized legal aid is to supply counsel free of charge, if necessary, it does not follow that there would be an increase in court cases, rather would it tend the other way. Litigation is always the last resort. Many of the cases of the poor are against other poor persons who are equally unable to pay attorney's fees. Rather is the service rendered one of advice. Conciliation and arbitration are the methods employed. The attorney of the legal aid department changes his attitude from that of advocate to that of arbitrator, and the fact that neither party can afford to pay counsel to fight his decree often gives his decision the validity of a legal judgment.

Should a fee be charged by the department of legal aid for services rendered? This has been a bone of contention at all conferences of legal aid organizations in the United States. The charging of fees is not contrary to any fundamental principle, but if it prohibits deserving clients from securing the assistance of legal aid societies, or if it worked serious hardship on them, then fees ought to be wholly abolished. The proposition to be solved is equality for rich and poor before the law. The world of clients cannot be divided into two classes, persons able to employ their own counsel and persons able to pay nothing. The large number of legal aid clients are not persons desiring charity, in fact, they would refuse assistance if they considered they were being given charity. They are self-respecting, self-supporting people, whose income does not permit the payment of a fee which a private attorney would charge. The ideal would be to secure justice for the poor at the price he could afford to pay for it, whether it be $3.25 or nothing. Many organizations feel that a small initial charge is worth while, because it puts the relationship between client and society on a more business-like basis, it tends to maintain self-respect, it prevents a tendency to pauperize, and it gives the client a greater sense of responsibility toward the society.

For the success of legal aid work certain requisites are imperative-leadership, moral support and financial support. As most of the issues which arise are legal in character, leaders should be men of legal training, with a thorough knowledge of the existing defects in the administration of justice and of large vision as to how those difficulties may best be overcome. The actual case work can be left to social workers and the attorneys, but the policy involved calls for riper experience and more mature judgment. The success or failure of legal aid work very largely depends upon good or bad support from the legal profession as a whole. No work of this kind can flourish in the face of hostility or suspicion, or indifference from the attorneys of the city. What must be made clear is that legal aid work represents one of the great legal reform movements of the times. It ranks with movements for reorganizations of courts and for simplification of procedure. It needs the same study and requires the same support. It needs the whole hearted support of the bar for while other reforms which are receiving the attention of the legal profession aim to better our justice—its purpose is to bring about justice where there has been none.

NOTE.—To meet some of the problems outlined above the Neighbourhood Workers' Association has recently opened a Legal Aid Bureau, where cases requiring legal aid and unable to pay for it may receive such service free of charge. This new work was made possible by the generous co-operation of the legal profession of Toronto. A large number of the leading firms have agreed to accept cases of this kind without charge.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF NOVEMBER, 1921.

COMPARATIVE TABLE.

	1921.		1920.	
Diseases.	*Cases.*	*Deaths.*	*Cases.*	*Deaths.*
Smallpox	76	0	437	0
Scarlet Fever	513	12	413	11
Diphtheria	940	82	666	43
Measles	36	1	303	1
Whooping Cough	78	9	177	14
Typhoid	72	21	113	21
Tuberculosis	202	107	145	99
Infantile Paralysis	10	1	6	4
Cerebro-Spinal Meningitis	6	5	4	4
Influenza	14	14	37	31
Pneumonia	....	169	....	116
	1947	421	2301	344

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR THE MONTH OF NOVEMBER, 1921.

	1921.	1920.
	Cases.	*Cases.*
Syphilis	256	219
Gonorrhoea	257	259
Chancroid	2	16
	515	494

News Notes

The Hamilton Branch of the Canadian National Council for Combating Venereal Diseases has adopted the name "Hamilton Social Hygiene Council." Under the auspices of the Council the Department of Social Service, of the University of Toronto commences a Course on Social Hygiene, commencing January 5th. The programme of the Course is as follows: January 5th, Professor Dale, "Social Hygiene"; January 12th, Mr. J. W. McFadden, "Law and Morality"; January 19th, Professor Sandiford, "The School Course"; January 26th, Mr. T. M. Porter, "Teaching Boys"; February 2nd, Dr. Gordon Bates, "Venereal Diseases"; February 9th, Dr. Edna Guest, "Problems of Girlhood and Motherhood"; February 16th, Dr. N. L. Burnette, "Mental Defect and Social Hygiene"; February 23rd, Miss Frances Brown, "Life Problems in Social Hygiene"; March 2nd, Miss Edna Moore, "How Life Begins," with an exhibition of the Film.

It is understood that the registration is heavy. Considerable publicity has been already given to the course and it is understood that a great deal of interest is being manifested in Hamilton.

The Secretary of the Canadian Association for the Prevention of Tuberculosis visited the Executives of all the Sanatorias in the Province of Ontario and Quebec during the month of January, discussing plans for finance and co-operation.

The Toronto Branch of the Canadian National Council for Combating Venereal Diseases has adopted the name "Toronto Social Hygiene Council." It has been found possible under this new name to embark in a number of new activities which are not possible under the old name.

The Canadian Red Cross Society as part of its Peace-Time Programme is making plans in co-operation with other organizations for giving relief in cases of local disasters.

Miss M. V. McDonald, R.N., has been appointed directress of an Emergency Service and is now in British Columbia assisting the plans of organization in that province.

Arrangements are being made for printing the complete Course of Social Hygiene lectures being given in Hamilton under the auspices of the local Social Hygiene Council. These lectures will appear each month in the PUBLIC HEALTH JOURNAL, commencing with Professor Dale's address in the current number. Reprints of the complete Course will be available at an early date. It is urged that all interested subscribers desiring to purchase same send their names to the office of the PUBLIC HEALTH JOURNAL immediately so that a sufficient number of reprints may be ordered.

The office of the Canadian Association for the Prevention of Tuberculosis has been exceedingly busy circularizing the local G.W.V.A.; Ex-Service Mens' Journals; D.S.C.R. centres of Treatment; all centres having Units of the permanent force of the Militia and Defence Department; all Military Institutions; Military Associations; Members of Canada R.C.M.P. Depots; General Hospitals, and ex-service men on the staffs of Institutions caring for the mental defectives, as well as all Provincial Boards of Health, and Sanatoria, etc., urging that ex-service men cast their ballot for scheme number one, for the disposal of the Canteen Funds arising from conduct of Canteens for Overseas troops. Many expressions of appreciation have been received for the information conveyed bearing on the Sheltered Employment in this circular, and gratitude expressed for the interest the Association has taken in the matter.

Dr. Geo. D. Porter, Director of the University of Toronto Health service, has just finished a series of personal health lectures to all the first and second year students in the different faculties.

Editorial

THE MINISTER OF HEALTH.

At a recent meeting of the Executive of the Canadian Public Health Association the following resolution was passed:—

That the Executive strongly urge the necessity of the establishment of a separate Portfolio for Health, with a Minister presiding;

That this Minister be Minister of Health alone and not be placed in charge of other Departments of the Government not pertaining to Health;

That the Secretary be instructed to write the Premier elect to the above effect.

We call the attention of our readers to the importance of this resolution. There is no doubt that among the various individuals and organizations which for so many years agitated for a Dominion Department of Health, the general hope and desire was that such a Department should be under a separate head with cabinet rank. It was not supposed that the appointed Minister would be required to administer several departments as was the case in the last Government and as is apparently to be the case with the present Government.

The establishment of a Dominion Department of Health three years ago, was an achievement greeted with joy by all public health workers and the fact that a Minister was named to represent health in the cabinet even though his interests were divided, was a great step in advance. That in this period of reconstruction in spite of the great damage done to the man-power of the country during the war and notwithstanding the revelations of the war concerning the deficiencies in health and physical fitness of the youth of the country, a Minister of Health should also be Minister of something else however important is surely a mistake.

In Dr. Beland, the new Minister in charge of the Department, a physician and a man whom all Canadians delight to honour, we should find a man stirred by a spirit of devotion to the welfare of his fellow countrymen as individuals even as he has been stirred in the past by a lofty spirit of patriotism and self-sacrifice in its cause. To him this Journal representative of the voluntary Health

Association of Canada proffers felicitations upon his accession to office. May his entrance into this new field of endeavour be significant in that it marks a new stimulus to public health activities and achievements in Canada both by Government and people.

If such is to be the case and well it may be under the present auspicious circumstances surely the new Minister should be permitted to specialize on health and health only. It was with a view of creating this opportunity that the resolution mentioned above was passed. It is to be hoped that it will be put into effect. The PUBLIC HEALTH JOURNAL urges its readers to use all the influence which may be possible in this direction.

Notes on Current Literature

From the Department of Information on Public Health, Canadian Red Cross Society

Health Education of Children.

An excellent article by Dr. Emmett Holt. Good health depends mainly on good health habits formed in childhood. These habits can best be developed by treating health as a game to develop the child's competitive spirit. ("International Journal of Public Health," Nov.-Dec., 1921, p. 573.)

Infant Mortality as an Index of Progress.

A comparison of the infant mortality rates of different countries. Most of these show a downward trend proportionate to the amount of attention that is devoted to child welfare work. ("The Nation's Health," Dec., 1921, p. 642.)

The Psychology of Posture.

The Director of Physical Education, Lansing, Michigan, explains how correct posture and carriage promote good health, physical energy and strength of character. ("Public Health," September-October, 1921, p. 301.)

Schools of Nursing as Educational Institutions.

Schools of Nursing have never been upon a proper basis. They have been operated as departments of the hospital organization rather than as educational institutions, with the result that too often the training of nurses has been subordinated and sacrificed to the business interests of the hospital. ("The Trained Nurse," Nov., 1921, p. 417-422.)

Health Talks.

A talk on health talks for industrial nurses by Mrs. A. M. Stabler, R.N., who has lately been appointed Supervisor of Public Health Nurses in British Columbia. ("The Public Health Nurse," Dec., 1921, p. 647.)

Prevention of Tuberculosis.

Sir George Newman, Chief Medical Officer of the Ministry of Health, presents a scheme for state action in the prevention of tuberculosis. ("International Journal of Public Health," Nov.-Dec., 1921, p. 557.)

Self-Disinfection and Venereal Diseases.

Sir Archibald Reid, on behalf of the Society for the Prevention of Venereal Diseases, presents the case for self-disinfection, and Dr. Otto May, of the National Council for Combating Veneral Diseases, argues against these measures. ("International Journal of Public Health," Nov.-Dec., 1921, p. 591.)

Report on Venereal Diseases.

This synopsis of the final report of the British Royal Commission on Venereal Diseases provides a convenient compendium of the whole subject of venereal diseases as elucidated by the recent enquiry, and should aid all those who lack time to study the report as a whole.

Vaccination Histories of Smallpox Patients.

An analysis of the vaccination histories of 18,374 smallpox patients in the United States during the first half of 1921, shows that 60.3% of the patients had never been vaccinated, 4.7% had been vaccinated more than seven years before the attack and only 1.6% within seven years of the attack. ("United States Public Health Reports," Oct. 14th, 1921, p. 2555.)

Barrier Charts for Health Officers.

A series of four charts which summarize the measures for the prevention and control of communicable diseases.

Physical Education.

The practical and educational value of physical training of women. ("American Physical Education Review," Dec., 1921, p 414.)

Vital Statistics of Canada, 1920.

A report from the Dominion Bureau of Statistics on births, marriages and deaths (including infant mortality) for the year 1920.

League of Red Cross Societies—Popular Health Articles.

"The Eye Policeman," October, 1921.
"The Common Cold," October, 1921.
"Disinfection," October, 1921.

"Infant Mortality, U.S.A." Statistical report of infant mortality for 1920 in 519 cities of the United States. Published by the American Child Hygiene Association, 1211 Cathedral St., Baltimore, Md.

"Happy's Calendar."... Daily health mottoes published in calendar form by the Child Health Organization of America. Dr. Emmett Holt says: "This nonsense is the best kind of practical sense in health matters. Its teaching is adapted not only to children, but to grown-ups."

"Producing Amateur Entertainments," by Helen Ferris. This book is a storehouse of information for those looking for help in suggestions either for a party or an entertainment.

"The Most Wonderful House in the World," by Mary S. Haviland. These illustrated stories for young children describe simply the workings of the human machine and the best methods for keeping it strong and healthy.

"The Play House," by Mary S. Haviland. This book explains home hygiene in the same manner as physiology is treated in "The Most Wonderful House" mentioned above. These two books should be a great help to health teachers.

"Jack o'Health and Peg o'Joy," by Beatrice Slayton Herben, M.D. This is a health fairy-tale written partly by children. Jingles teaching health lessons and parodying the rhymes of Mother Goose are woven into the daily life story of a boy and a girl.

Book Reviews

The Principles of Immunology. By Howard T. Karsner, M.D., Professor of Pathology, Western Reserve University, Cleveland, and Enrique E. Acker, Ph.D., Instructor in Immunology, Western Reserve University, Cleveland. J. B. Lippincott Co., publishers, Philadelphia and London. Canadian office: 201 Unity Bldg., Montreal. 309 pages, with 18 illustrations and 2 plates. Price $5.00.

This work on the principles of immunity is a welcome addition to the available literature on this subject and is destined to take an important place, especially in the training of students and practitioners whose work does not render it necessary or expedient to consult the more exhaustive treatises which are essential for advanced students and laboratory workers.

The authors have apparently made a definite attempt to be as dogmatic as they feel is consistent with the facts. Possibly they have overstepped the mark in this respect in several instances, but we feel that for the class of reader for which the book is written, this fault will not be a very serious one. It is to be regretted, however, that the authors did not see fit to include precise references to the literature which they quote, as this is often of great assistance to the student who is particularly anxious to search more deeply into any given problem.

The section dealing with haemaglutinins is up-to-date and authoritative, and will be appreciated by those who have to make practical use of this test for transfusions.

Of course, the small size of the book precludes anything but a most concise discussion of the problems dealt with, but this is often an advantage rather than a fault to the type of reader for which this book is written.

In the opinion of the reviewer the index is too brief and renders some of the material in the work somewhat inaccessible.

H. K. D.

Manual for Health Visitors. Edited by Mrs. Enid Eve. Cloth, $3.00. Pp. 194. New York: Wm. Wood & Co.

This book is a handy and complete reference for those interested in the actual carrying out of child welfare work, and knowing the details of how much work is carried out in the maternity and infant welfare centres of the Old Country. The historical sketch of the development of the work is interesting, as is also the discussion on appointments, opportunities for workers and the future possibilities of the work.

There is much to be learned from this book, and a mental comparison to local efforts is both instructive and stimulating.

A. G. FLEMING.

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Health Service in Schools*

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MEDICAL Inspection of Schools, or Health Service as it is more correctly named is recognized by the members of this Association to be an essential part of the school system, and our discussion of the topic may deal, therefore, with methods rather than with the necessity for that service.

The following report of methods adopted in Toronto is presented in the hope that the underlying principles may be capable of general application. The methods themselves may be unsuitable in towns or rural districts where the health resources are less adequate or in cities which have not yet developed a spirit of team-play in community service.

A brief outline of the Toronto plan of organization is necessary in order to account for the close relationship of the health service in the schools to other community services. With a population of 525,000 eight district offices of the Department of Public Health have proved to be necessary, the City Hall serving as a co-ordinating centre. The Department Services most closely concerned with the district offices are the Medical Services, the Dental Services, the Welfare Branch, and the Division of Public Health Nursing.

Each district office is in charge of a superintendent of Public Health Nurses to whom the field nurses of the district report at noon. Five special supervisors are responsible to the Director of Public Health Nursing for the development of various branches of the nursing work in connection with the eight offices. One of the busiest of these special supervisors is the nurse responsible for the nursing service in the schools.

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*Read at the Annual Convention of The Child Welfare Council of Canada, Montreal, September, 1921.

Twelve public health nurses are attached to ten hospitals, acting as liaison officers between the various departments of the hospitals and the public health nurses in the field. One of the five special supervisors is responsible for the development of this Hospital Extension Service.

A District Officer of Health, responsible to the Director of Medical Services, is closely associated with each office.

The Neighborhood Workers' Association, a federation of social agencies both public and private, has stationed its district secretaries in these same eight offices.

Thus the daily work of doctors, dentists, health nurses, hospital clinics, and social workers is easily co-ordinated. These departments approach the entire field of medical and social work in many ways, but the most satisfactory approach is through the schools, since children come to the schools from every type of home.

Toronto has a school population of approximately 85,000, accommodated in 92 public and 28 separate schools. 2,147 teachers, 13 doctors, 26 dentists, 84 nurses, and 25 dental assistants are employed in these schools.

Health Service is provided for the Board of Education and the Separate School Board by the Department of Public Health, this co-operation between the civic departments having been maintained for the past four years.

The supervisor of our school nursing lays down three aims for Health Service in the schools:

1. Control of Communicable Diseases.
2. Correction of Defects.
3. Health Education.

Health Service in schools is much less capable of routine methods than is the work of the teacher. Let us visit a school of twenty class-rooms on the day of the medical officer's weekly visit, choosing a school which has a dental clinic, and let us remain with the public health nurse as she works with doctor, dentist, and teachers.

The nurse reports at the principal's office at 8.45, visits the Dental Service room to make sure that the dental assistant has everything ready for the dentist, and passes on to the Medical Service room. Fifteen children, who have been absent for more than two days, are waiting for her permission to return to their class-rooms.

John is a well-known malingerer with the usual story of a headache and the nurse signs his slip without comment, knowing that the undisciplined home conditions are already being studied and dealt with by a social agency and that she herself must visit the home constantly until the baby is past the age when careless feeding is disastrous.

Angelina reports the arrival of a baby brother and the nurse reminds her that he must be registered at the City Hall by his father, like all good Canadians. Angelina's mother has been attending the prenatal clinic and the nurse, fearing that satisfactory arrangements for a housekeeper have not been completed, promises that she will visit at once. Angelina is in the junior fourth class, and may join the School Health League next February, where she may learn how to help mother take care of the baby brother.

Elizabeth was sent home a week ago with instructions for cleaning her infested head, but the condition remains unchanged. Defiantly she declares that her mother says her hair is all right and that the teacher must take her back. The child's respect for her mother must not be weakened, but the quiet talk which is needed to handle the delicate situation will not be possible until later in the morning, so Elizabeth is enrolled temporarily as nurse's assistant.

The stories of the other children are quickly considered and they return to their class rooms. One boy, however, must be sent home because notice has not been received from the quarantine inspector that the scarlet fever card is off the door. Three other children are sent by the teachers from the class room to the Medical Service room.

Jennie has red eyes and is sneezing, so she must go home with a form notifying the mother that the city doctor will call in the afternoon. The nurse has little doubt that Jennie has fallen a victim to the prevailing measles and records the names and class rooms of the two brothers, for use in the event of a positive diagnosis.

Albert appears with a sore finger. Albert's mother is subnormal mentally and the task of teaching her to give the necessary care is difficult. Carefully the hand is bathed and dressed and permission is given to come every morning for a clean bandage.

Charles' teacher has discovered that he comes repeatedly to school without breakfast. Hesitatingly, the loyal child reveals a condition of neglect that needs the skilful handling of the social worker. The nurse knows that the social worker will meet closed doors unless a welcome is prepared, so she secures the boy's consent to talk the breakfast proposition over with his mother, hoping that the next step will reveal itself.

The medical officer is not expected until recess and the nurse seizes the half-hour remaining to make a class room inspection. Her choice falls upon the Kindergarten, which was inspected only a week ago, but diphtheria is prevalent in the neighbourhood, and the little tots cannot be relied upon to report sore throats to their teachers. The recess bell rings before the nurse can have even a moment of play with the Kindergarteners—but all the throats were clear and she leaves with a light heart.

Arrangements have been made with the medical officer for the complete physical examination of eight children in the presence of their mothers. Four children are from the first book, three from the junior fourth, and the eighth is a third book child selected for special examination because he shows marked evidence of mal-nourishment.

The selection of children to be examined is the result of clearly defined policies. The plan of studying a few children with the assistance of the parents has been adopted in preference to the rapid examination of many because the parents' co-operation must be secured if defects are to be remedied, and health habits established. The mother will welcome and understand suggestions given to her by the doctor when she would misunderstand or resent them if received through the child, in addition to which the history that the parents can give is necessary for an understanding of the condition of the child. Forty-nine per cent. of the parents responded last year to the invitation to be present.

With the present staff of medical officers even the limited examination of chest and heart can be given only twice during the child's school life. The attendance in the Kindergarten is irregular, so the first book is selected. The junior fourth is chosen because one year of school life remains in which to correct remedial defects before the child passes beyond the range of medical inspection. Children with marked defects may be selected from other grades by the nurse. Carefully the policy is maintained of examining all children regardless of family income. When treatment is found to be necessary, the parents choose between private physician and hospital clinic on the basis of their ability to pay for the service. Under very rare circumstances the district officer of health must accept responsibility for treatment.

The first child examined this morning is found to be without defect, but the mother is appreciative of the interest shown and considers her time well spent. She is a member of the Home and School Club, and suggests that the medical officer should address the Club, explaining the purpose of the Health Service, which is resented by some of her neighbours and their private physicians.

The medical officer turns from an examination of the next child to question the mother as to the family history, and the public health nurse is finally instructed to arrange for an examination of father, mother, and children in the syphilis clinics. Social agencies have had this family under their care for over a year without knowledge of the underlying cause of the poverty and inefficient home management.

The mal-nourished child is the oldest in an apparently healthy family. The mother's history reveals the fact that her first husband, the father of this boy, died of tuberculosis when his son was four years old. The second husband is out of work and no occasion having arisen since coming to the city for calling a private physician, the public health nurse will arrange for the boy's examination at the Tuberculosis Clinic connected with the Hospital for Sick Children. In the meantime an appointment for dental service will be made.

Careful entries are made on the class room card which the teacher gave to each of the eight children. This card carries the class record on one side, the physical record on the other, and follow the child throughout his school life. Similar cards have been brought to Toronto schools from England and the United States.

The physical record card is gradually being introduced into the Child Welfare Clinics in Toronto in the hope that the clinic accommodation will be enlarged sufficiently to enable us to follow the child through the pre-school stage up to the Kindergarten when his card will be transferred with him.

Now let us go with the nurse to the Dental Service room. Nine children have been treated this morning by the dentist, all having come from an adjacent school which is permitted to make appointments on one morning of each week.

The policies of the dental service are not yet clearly defined. Three dentists devote their entire time to survey work which is designed to discover defects and secure their treatment by private dentists. On the completion of a class room survey a talk on Oral Hygiene is given by the dentist and literature distributed. With children in all class rooms needing treatment, it is difficult for the Director of Dental Service to assign a larger number of dentists to work of a purely educational or prophylactic character. The dentists doing operative work are supposed to give the service to the child of any ratepayer if the parent applies for treatment, but the pressure of work limits the service to the comparatively poor. A serious difficulty is that those willing to pay for dental service find many of the private dentists lacking in interest where children's work is concerned. With the public health nurses demanding appointments for older children in urgent need of treatment, a policy of limiting the service to the younger children is difficult to enforce, and yet the rigid enforcement of a rule to treat only the young children would without doubt bring about greater results for the future.

The dentist has gone for the day. His assistant has put away the instruments and is completing reports for the district office. The public health nurse returns to Elizabeth, who has proved to be a capable assistant, and has a quiet talk with her in the Medical Service room. The result of the confidential talk is that the nurse decides to make a home visit on the only day of the week when the wage-earning mother is at home and to help her with a general clean-up of all the heads of the family.

Responsibility for the personal cleanliness of the children must not be assumed by the nurse if she is to conserve her time for duties which cannot be undertaken by the teacher, but sometimes the Elizabeths in the school need the combined efforts of teacher and nurse.

The Health Service in the schools is a part only of the work of District Officers of Health and Public Health Nurses. The doctor visits another school until three o'clock in the afternoon when he starts on a round of home visits which are largely concerned with the control of communicable disease.

Owing to the visit of the doctor the nurse has spent the entire morning in the school although thirty-one per cent. of the working day is the average time devoted by the nurses to that service. At noon, she reports to the district superintendent and enjoys a comfortable lunch with the other members of the district group. In the afternoon, she will make home visits. To-morrow morning she will readmit school children, will examine three classes for evidence of communicable disease or physical defect, and will follow up each inspection with a health talk. Possibly she will tell the children stories about the Good Fairy Health and her friends, or she may deal with one of the eight subjects which must be covered during the year if the teacher is not yet interested enough to do so. With the teacher's co-operation, she is helping the children to establish good health habits, and finds that the appeal of self-interest has proved to be less effective with children than that of class honour or Canada's need for healthy men and women. Once having been seized with the desire to be healthy and strong, the child must realize that health depends upon his habits for the seven days of every week in the year, and realizing he must learn self-discipline.

In order that the public health nurses may teach in the way that results in action, a course in Educational Psychology specially designed to meet their needs has been secured.

If the district is one requiring the services this same nurse has organized a weekly Child Welfare Clinic which will be attended by some of the mothers of her school children. Twenty-four of these clinics have already been established in Toronto. Infants and pre-school children attend in numbers and volunteer assistants help to make the work of doctor and nurse possible. The doctors in charge of these clinics are all keenly interested and the influence of their work is revealed in a lowering death rate.

Of the three aims laid down for a School Health Service, the third—Health Education—is the one which must constantly be emphasized by a Department of Health, not only in the schools but in the homes. Tradition and habit have identified doctor and nurse with remedial work, and the inexperienced among them become absorbed in that branch of their service. The pressure of the demands for remedial work cannot be evaded, and the nurse, even more than the medical officer, is crowded with opportunities to do things which it is not always wise to attempt. She becomes expert in avoiding obligations which can and should be met by others. One example will suffice.

In the school year 1919-1920, the public health nurses in Toronto recorded 64,000 treatments given to children in the schools, but they recorded only 2,800 health talks. During the following year the number of treatments was reduced to 28,000 by a skilful throwing of responsibility upon the mothers—a method which had much more far-reaching results. The health talks increased to 5,000, in addition to which many more were given by the teachers at the nurse's instigation. The next year will see still more health teaching undertaken by the teachers, with the supporting interest of the public health nurses.

While the Health Service in the schools places the emphasis upon health rather than upon sickness, it cannot escape responsibility for securing remedial treatment, and is closely concerned with the defective and the underprivileged.

Physical defects encountered in the schools are many and varied. In Toronto, co-operation with private physicians is good, and with the hospital clinics it is all that could be desired. The action taken by social agencies is becoming increasingly effective.

The Board of Education and the Separate School Board have adopted the policy of establishing auxiliary classes for defective children who will benefit by special class room methods, and the selection of these children has been made the responsibility of the Department of Public Health.

For the pre-tubercular child and those with other conditions which will respond to the treatment, two Forest Schools and five Open Air class rooms have been established and startling results obtained. One Sight Saving Class has been opened for children whose defective eyesight would be further injured by attempting to study with standard school equipment. Children with defective hearing are being selected for a special class, and it is possible that crippled and epileptic children will also receive special consideration.

The presence of large numbers of mentally defective and "dull normal" children in the schools is a well known evil. To quote from the report of the Psychiatrist of the Department of Public Health, who is at work in the schools: "The school survey at the present time is mainly one of gathering statistics and picking out the number of subnormal children in a given school, and from that number selecting the fifteen children who most urgently require special teaching."

As a result of this survey, children who could not benefit by any form of teaching at present possible in the schools have been excluded and fifteen Industrial Classes have been established. The Psychiatrist considers that the survey "serves a very useful place in educating the teachers, showing them the difference between mentally defective and dull normal types, and helping them to distinguish these types from the normal child who is unruly or retarded from lack of home control and poor environment, or from physical defects and malnutrition." It is hoped that a Central Clinic will be established in order that each individual child may be carefully studied in relationship to his environment and physical defects contributing to his condition may be corrected before a final decision as to school treatment is made.

The value of the close relationship of the Health Service of the schools to other welfare work in the city is nowhere more clearly demonstrated than in dealing with the physical and mental defectives in the school. It has been possible during the past year to terminate 85% of defects other than dental defects found in the public schools, the word "terminated" being used in the sense that treatment has been instituted. Unfortunately, not all defects respond to even the best of treatment.

In dealing with tuberculosis the splendid resources available could not be fully utilized were the health services not so closely co-ordinated. It is comparatively simple, under the Toronto plan, for the public health nurse to call upon the resources of adult and children's tuberculosis clinics, Forest School, Open Air Classes, Preventorium, Sanatoria, and social agencies, in solving family problems.

The underprivileged child is still another concern of the Health Service in the schools, since poverty and disorganized homes are both the cause and the result of lack of health.

There are many aspects to this question, but one may be forced upon the majority of us this winter. Increasing numbers of children are undernourished and so are unfit to carry on their school work, with the result that free distribution of milk or free lunches have been suggested to deal with the situation. It would be unfortunate if either were provided on the basis of poverty. The cruelty of separating a child from his fellows to receive a drink of milk because his parents are poor is obvious to those who must select the child and dispense the milk.

The Home and School Clubs of Toronto are preparing to deal with this delicate task and plans are being formulated for avoiding serious injury to the spirit of independence which will be one of the child's greatest assets.

Children may be selected by the medical officer for supplementary diet on the basis of physical need. Their weight and health habits could be recorded at a weekly conference of all the children selected and the child's co-operation enlisted in a battle for complete health. The money needed to provide the milk or specially planned lunches would necessarily be raised in a way to avoid unwise newspaper publicity. One danger to be avoided is that of placing the entire work involved in the plan upon the shoulders of the public health nurse. She has other urgent duties. The teacher also has other duties.

A more ideal plan which could include the best features of the first would be the establishment of a cafeteria on a cost basis in each school where the need exists. The child whose parents could not provide adequate nourishment at home or in school could be provided with the money by the social case work agency responsible for the social treatment of the family.

Medical Inspection or Health Service in the schools was originally designed to deal with the child, but experience is proving that it is of inestimable value to the community as a whole by providing an opportunity for Departments of Health and co-operating agencies to deal with home conditions revealed by physical defects or faulty habits in the children. Experience is proving also that the best results are obtained from a Health Service in the schools when close co-operation is maintained between doctors, dentists, nurses, teachers, and social workers, and, above all, with the mothers and fathers.

The School Programme and Sex Education

BY PROFESSOR PETER SANDIFORD, *Faculty of Education, University of Toronto.*

WE of our generation unfortunately got most of our instruction in sex matters from impure sources. Our Victorian parents were either too shy or too ignorant to enlighten us. To our innocent and natural questions about the origin of babies they either answered by lies such as "the doctor brought it in a black bag" or "it grew in the strawberry (or cabbage) patch," or they evaded the issue. But our curiosity remained unsatisfied and answers were sought elsewhere. To our lasting hurt there were always filthy-minded companions at hand who were more than willing to pour misinformation into our ears. Some this knowledge turned into prudes, while most of us were the losers by it.

Parents and teachers now recognize that if this knowledge about sex is not gained from a pure source, it will be gained from an impure one. The problem is not one of sex education or no sex education, but one of pure instruction or impure instruction. Children do not remain in ignorance of sex matters; they, therefore, should be rightfully and carefully taught.

But sex instruction is not sex education; it is only a part of it. Information about sex is not even sufficient to keep a person on the narrow, moral path, else we should find doctors and nurses the most moral of human beings, and they would be the last to claim this for themselves. Sex education involves (1) a training in right habits; (2) a development of proper attitudes and ideals regarding sex; and (3) the imparting of information.

The proper place for sex education is the home, and the proper teacher is the parent, especially the mother. But the home, as in so many other matters, has fallen down in this task, and the burden has been shifted to the school. Our grandmothers would have been horrified to learn that cooking and sewing were taught in schools, nay, that university degrees were given in domestic science, but we view such progress with a dispassionate eye. So it will be with sex education. We look askance at it as a school subject, but our grandchildren will wonder why a training which was so necessary

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Read before the Hamilton Social Hygiene Council.

to a healthy parenthood and citizenship should have been left to chance and the gutter.

Still there are tasks in sex education that the home cannot evade. The pre-school age, so pregnant with possibilities in habit training, is one in which the mother is the chief, sometimes the only teacher. We now know that the sex instinct does not lie dormant for fourteen years or so, and then suddenly blossom forth fully developed; it is a slow developing instinct in which early manifestations may be discovered even in the first year of life. By pretending that it did not exist in early childhood, or thinking it a shameful and forbidden thing, Freudian psychologists tell us that incalculable harm has been done. They probably overestimate the part that sex plays in life, but making every allowance for exaggeration, we know that the repression of the sex instinct has ruined many a life.

Before pursuing this argument any further we may turn for a moment to the school and sex education. The school is a conservative institution already overburdened with subjects. Why add another to the list? Further, arithmetic, reading and writing are not instinctive. Sex is an instinct, that is, it will develop of itself with the slightest of stimuli from the environment. Can an instinct be made a subject of instruction? Is it not better to let things be, or teach sex, if we must teach it at all, incidentally? These are pertinent questions, too important to be shelved or evaded. The answers to them seem to be that sex is so vital to the individual and the community that its development and guidance cannot be left to chance; and that incidental instruction always means in the long run no instruction at all.

This being the case we must frankly face the issue. We must realize that there are stages in the development of children—infancy, babyhood, childhood and adolescence—and for each of these there are appropriate methods of approach. Moreover, students of the subject tell us that the sex instinct involves two semi-independent sets of phenomena. The first of these are the physical phenomena known as tumescence and detumescence, the second the contrectation impulses which involve mind and feeling. In infancy, babyhood and early childhood there are few if any contrectation phenomena; sex is solely a physical matter. Later, contrectation or emotional impulses appear finally centring around the mate whom we choose for life.

Early education in sex then involves mainly training in right habits and proper attitudes. The aim should be to keep sex development normal, and to keep contrectation impulses from making too early an appearance. The allaying of the natural curiosity of children with such simple yet correct information as they can understand is an important precept at this stage. Young children in the family should become accustomed to sex differences through seeing each other in the bath. Nudity at this stage has a positive moral influence. They should be taught in practical fashion the virtues of physical exercise, especially in the fresh air; of daily baths which should become cooler and cooler as they grow older; of hard beds without any companions to share it; and of loose and hygienic clothing. My old schoolmaster used to tell us, "Boys, remember that the devil hates cold water; give him plenty of it!"

The importance of a proper attitude on the part of the parent or teacher is most important at this and all subsequent stages. The proper attitude is that of a dignified frankness, not that of shame, or mystery, or frivolity, or vulgar familiarity. The child's confidence must be kept, so that he comes to his mother (or father) for anything he wishes to know. A little later, when he comes into contact with the filthy-minded school companion anxious to initiate him into the mysteries of sex he can say, "I know all about that, my father told me, and I don't want to hear about it from you."

Coupled with this training there must be contemporaneous development of ideals of purity, reverence for parents and parenthood.

As the child reaches nine or ten years of age the teacher must perforce play his part. Just what curriculum should be offered is a matter of dispute. I can only suggest one or two methods of approach. In connection with nature study the essential organs (the sexual organs) of a plant can be taught. The stamen with its anther, filament and pollen grain, is the male generative organ; the pistil with its stigma, style and ovary the female. The necessity for the fertilization of the female ovules (eggs) by the male pollen before the seed will ripen, can be taught to quite young children. Animal reproduction can be best approached by the study of fishes. Here the milt of the male and the roe of the female can be shown to correspond with the pollen and ovules of the flower. Later, in school life, the universal law of development of all animals from fertilized eggs can be shown. The relation of the milt of fishes to the semen of man will be readily seen.

If children are accustomed to biological work in which scientific terms are used a great gain will be made. Knowledge of the method of procreation of humans will not come as a shock, but will be regarded as a natural and therefore pure phenomena.

Special instruction regarding the possible abuse of sex organs by boys, and of the phenomenon of menstruation to girls, will have to be given. The ideal teacher is, as before, the father for the boy, and the mother for the girl. But too often this solemn duty will be left to the teacher, man and woman, respectively. Not everybody is fitted to give it. According to Bigelow the following classes of individuals are unfitted:

(1) Those who cannot talk calmly and dispassionately on the subject.

(2) Those with an abnormal outlook on life, who are too readily influenced by psychopathic literature.

(3) Insufficiently informed people who tend to stress the abnormal in their presentation because of hasty preparation.

(4) Those who are pessimistic as a result of unfortunate personal experiences.

(5) Those of flippant attitude and questionable ethical behaviour who cannot command the respect of their pupils.

The proper preparation of teachers is a "sine qua non." In Canada practically nothing has been done in this regard. In the United States the Interdepartmental Social Hygiene Board appropriated $300,000 for each of the two years 1918 and 1919 (my latest information) to further such instruction. A great proportion was spent in introducing courses into normal schools and universities, about thirty institutions taking part. Teachers College in New York City has offered courses for some time past to its teachers-in-training. Is it too much to hope that Canada will arouse herself soon to the necessity of such work?

Lastly, when the boys and girls are near the end of their High School course or beginning a university career, the topic of venereal diseases may be broached. A useful method of approach is through bacteriology and the relation of bacteria to the production of disease.

After a discussion of diphtheria, typhoid fever, toxins, antitoxins, antiseptics, disinfectants, preventive measures to secure uncontaminated food and drinking supplies and such topics, it is then a simple matter to allude to the peculiar proneness of the sexual organs to infection and the consequences of abuse or infection through ignorance.

But whatever methods of sex education be adopted, the prime necessity of inculcation of right attitudes and proper ideals should never be forgotten. With these things secure everything else follows naturally.

The Venereal Problem in Large Towns and Small Cities

BY HON. DR. WM. F. ROBERTS, *Minister of Health for New Brunswick.*

Read at the Annual Meeting of the Canadian Public Health Association, June, 1920.

ALTHOUGH a territorial limitation has been assigned me in the consideration of this matter, it has been recognized for ages that the question or problem or status, call it what we will, of venereal diseases and its relationships is an essential unit whether in town or country; under the pole or upon the equator; in civilization or in savagery and amongst all classes, creeds and colors. As a disease, syphilis and its congeners differ *in toto* from all others in the way of origin and propagation. They are universally and reciprocately associated with sex, and while it is easily possible to conceive a community in which some individual disease may be confined to one sex in its incidence, it is almost impossible to imagine such a state of affairs, existing with reference to venereal disease. And just here the thought obtrudes, that although such a law seems to inject even more than the usual difficulty and complexity than is found in dealing with most disease, yet, as is often the case, this very difficulty may, one day, prove the key to the solution of the whole problem. In a word, eliminate the disease from the female, say, and keep it so for a generation, and syphilis will disappear as distinctly and completely as has the dodo and the passenger pigeon.

But a far graver and more sinister law attaches to syphilis and its contraction and propagation than even this double sex association. It is contracted, not as are other diseases, from malnutrition, from accidental and often unavoidable contact, from hereditary predisposition, from over-exertion or accident, from toiling and moiling to keep hunger and nakedness or death at bay, not in consequence of any of the hardships and burdens and miseries of life, but because of the most universal, most primitive and overmastering instinct which mankind possesses. This is the thing which is bound up, indissolubly, with venereal disease, and the sooner we, who would fain combat this gigantic evil, look this fact squarely in the face and recognize it, the sooner we shall succeed in doing something to abate this parasitic monster which has engrafted itself upon our holiest and most important appetite.

It is, therefore, no matter of surprise that these diseases are denominated the "social evils" *par excellence,* and, although there are numberless kinds of vice in the world, that the particular one which engenders venereal disease is known specifically as "vice." The questions which arise from the prevalence of these diseases, are indeed, as purely social as is the custom of polyandry in Thibet; polygamy among the Mahometans; foot-binding in China; caste in India, and the eternal "temperance question" in our own land.

To attack it successfully, we must attack society in one of its most ingrained temperaments and this applies not only to our own society, but to that practically of the whole world. Prostitution and irregular and illicit intercourse must be abrogated and it is only necessary to say this to obtain some notion of the magnitude of the task which lies before us. But this reflection comes uppermost. As in manufacturing industry, the by-products are not infrequently found to be far more valuable than the particular article to make which the factory was started; so, in abolishing prostitution. Horrible as the evils of venereal diseases are it is pretty certain that even they are surpassed in the downright misery and wretchedness resulting from prostitution, professional and clandestine, altogether apart from the physical disease of which they are the chief cause. What about the unspeakable shame and sin of divorce? Of the almost equal shame, and even greater agony of jealousy in married life, not, perhaps, despite popular impression, much more frequent on the part of the wife than of the husband. What of the multitude of women, even putting aside disease, yielding to one outrage on social law and well-understood custom, quickly fall victims of other anti-social impulses and become adepts of the unholy science of lying, stealing, and possessed of the demons of alcohol, envy, indolence, slander, and, often, of murder, itself. Does any one dare deny the close connection of infanticide pre- and post-natal with prostitution public and private? Is there a single doubter with respect to the mental distortion and degeneration accomplished by female unchastity? Is it not a truism to say that the laxity of social morality in women is the greatest psychological injury that can befall a national community? And if this be true of the women of a nation, what of its men? Unchastity, here, if anything, is still more injurious, because more blatant and carried on with more effrontery. With a few rare exceptions, it blasts intellectuality, or transforms it into the servant of those who take evil for their good, and whose very light is utter darkness. Who can think of a greater travesty of animal life of any kind, that he whose real and chief thoughts, despite his outward and articulate appearing, are chiefly centred upon sexual pleasures and so-called conquests?

Such, then, are a few of the by-products which infraction of the earliest and most important restriction known to man and civilization engenders, and they are of such colossal influence for evil that, were venereal disease exterminated to-morrow, its chief cause would still remain and claim our hardiest and most concerted and wisest efforts at extinction.

I have seen fit to thus dwell upon this unsavory subject, because of the logic of the matter. We may and must attack syphilis with every weapon at our hand, but it is a discouraging and almost futile task to continually work at the cleansing of a stream of its impurities without also abolishing the source of the pollution. We may, it is true, abolish an obnoxious tree, by clipping off its leaves and twigs as they appear spring after spring, but the readiest way is to apply the axe to the trunk or roots and so cause it to perish irretrievably.

It is questionable if the incidence of venereal disease in small cities and towns is really proportionately less than in metropolitan populations. In general, it appears less because of the greater care taken to conceal it, in consequence of the odium attached to it, and the universality of local gossip and condemnation peculiar to such places. From this very fact, the control and cure of these diseases in these localities is, perhaps, more difficult of accomplishment than under any other conditions. In strictly rural communities one's individuality and privacy may be better maintained than in small towns, and the same remark holds true to a still more pronounced degree in large cities. It has been well said that a great city may be made by, and frequently is to, the individual, the loneliest and most secluded spot in the whole world. But in the town, each one lives in the blaze of his neighbour's scrutinizing glance, and under the continual lash of his busy tongue. Even the physician, from time immemorial the sacred depositary of vital facts, can scarcely keep his deposit from being burglarized by the prying gossip. And therefore as the danger of publicity is great, so much greater is the effort at concealment of any fact that is capable of such treatment. And of all physical ailments, venereal diseases as physical manifestations, perhaps, lend themselves most easily to such hiding. Even, as in syphilis, in its eruptive stages, the deadly ignorance of the masses is such, with respect to skin lesions in general, and this applies to a large proportion of medical men, that no excessive worry need be occasioned the victim, lest his disorder may become known. It is only a few days ago, in a large hotel in one of our great cities, that the writer saw a full-blown late secondary syphilitic eruption upon the face of a waiter at an adjoining table. The poor fellow wore an excessively high collar, one, almost of Gladstonian proportions, to conceal the more pronounced lesions of the neck.

In the vast majority of cases, venereal diseases, except in late tertiary stages, dces not inhibit ordinary physical activities, and, so, concealment is not only possible, but proof of the actual presence of the disease, is now, by present-day usage, only finally demonstrable under laboratory tests.

Plainly, therefore, the task before us of the control and abatement of these diseases is a most difficult one, and the only practical way of proceeding is the enlightenment of the people respecting the grave nature of these diseases, and the establishment of a public opinion really reprobative of irregular intercourse in all its forms.

Indeed, the latter is the crux of the whole question, and has been, from time immemorial. Unless and until prostitution can be made as abhorrent to the public conscience as dishonesty, lying, stealing and murder are at present, our task of combating venereal disease will be a Sisyphus one. By rigid legal restrictions and public measures, we may abate it in some of its more prominent and outstanding results, but it will be a constant bailing out of the brook with a tin dipper. Nor need we despair that such a public opinion can be brought about. For five thousand years slavery was universally conceded to be a right and commendable practice in social life. For ages it was strictly defended by statesmen, theologians, moralists and economists. Yet not, perhaps, in all the civilized world, is there a man to-day who would dare to come out openly in its favour. Duelling, for centuries, enjoyed a yet higher vogue, yet now it is, and rightly, considered nothing less than sheer murder. Our ancestors, for many generations, thought it no shame to render themselves helpless by intoxication with alcohol, upon appropriate occasion yet now, with us, the drunkard is reckoned not only useless but contemptible.

Yet another necessary phase of the war against prostitution which is, in its essence, war against venereal diseases, is the unequivocal part the female plays in the dissemination of them. No better proof of what may be called the real trifling and insincerity displayed by the public, generally, with respect to prostitution and syphilis and gonorrhoea, may be had, than its position with relation of women thereto. Women, continually, through sheer hypocrisy on the part of men, a form, I suppose, of pseudo-chivalry, have been represented as the helpless and unwilling victims of prostitution and venereal disease, and this puerile and vicious theory has been sedulously accepted and propagated by the women themselves. We all know, both men and women, in our inmost souls, how utterly false and monstrous such a theory is. Innocent victims there are indeed, by the ten thousand, among women, but the same proportion applies to men. Neither sex can for one moment assume a position either of innocency or superiority in this matter. Both are culpable to an equal degree, but from widely diverse propensities. The male sins and sustains the injury because of unrestrained and perverted appetite; the female (the professional prostitute and multitudes beside) sin and impart the injury from more complex motives. She sells herself for money: for social advancement; for idle and luxurious living; because of a love of dress and finery; from a weak pandering to the favour of the male, and, often, because she recognizes the widespread custom, and feels she is not singular in her action.

What, then, is our bounden duty, our only resource, but to make these vicious principles in both male and female obsolete and altogether as antiquated and out of tune with the times as are the past customs of slave-holding, of duelling, of intoxication, or, indeed, of tight lacing, umbrageous hoop-skirts, and dress wigs.

Then, again, there remains for the woman as a part of her contribution to this, the greatest of all reforms ever undertaken by mankind, that she cease to consciously or unconsciously incite lust by her attire. Let her no longer sacrifice to suggestive fashion and fancy that female beauty and sexual instinct are indissolubly united in the male mind. Despite the pernicious teachings of many of our modern psychologists, this is a fundamental untruth, and if not exposed and rectified, will lead mankind to its doom.

In a word, the female world needs education in the combat against its greatest enemy; it should bravely face about and recognize in this, as it has in so many other of life's problems, that it is not, really, secondary to man, either for good or evil; that while it conquers its just privileges and rights for itself it should also gallantly assume its just responsibilities and duties.

Having done this, having them set the fashion, can there be the remotest shadow of doubt that the male world will follow, obediently and gladly, without misgiving, as it has invariably done in times past? Woman by her innate and quick sense of pity and compassion, her invincible love of order and cleanliness, her angelic regard for her offspring and the man whom she loves, has led the race from savagery to culture, and can still lead it, if she will, not only away from the unspeakable evils of syphilis and gonorrhoea, but from those evils and miseries compared with which even venereal disease seems innocuous, and which have their spring and origin in prostitution and all that the term imports.

Mental Defect and Social Hygiene[*]

N. L. BURNETTE, *Director of Occupational Therapy and Vocational Guidance, The Canadian National Committee for Mental Hygiene.*

In accepting the honor which you have conferred upon me by asking me to address you this afternoon, I am attracted by the opportunity of touching upon a very broad theme.

Serious as is the question of Venereal Disease, the title of your association implies that you are interested in health in all the interrelations of life. If we tackle the problem of mental defect in a wise and statesmanlike manner we shall strike at a root from which springs not only much of the venereal disease evil but of nearly every other social disaster as well.

Mental deficiency is a condition of arrested or imperfectly developed intelligence, as the result of which the individual is unable to benefit normally either by instruction or through the lessons of experience. At the lowest end of the scale we have the idiot and imbecile who because of the extent of their handicap gravitate naturally into institutional care and are protected from their own shortcomings. The middle grade and high grade defectives constitute the greatest danger socially, because their defect is not apparent from surface indications, and whether their lack of wisdom, suggestibility, and inability to foresee results, leads them into trouble or not, is a mere matter of chance and environment.

The extent to which mental deficiency exists in an average Canadian community has been definitely determined in relation to children of school age only. Careful studies covering very wide areas of the Dominion have been made by experts and the percentage of mentally deficient children placed at not less than 2.5. No such accurate survey of a cross section of the whole population has as yet been made. It is said that the data derived from school studies is so large that it represents a picture of the whole population and that the figure quoted holds good.

Frankly, I should like to see co-relations worked out for the various age groups as well as for the incident of adult immigration which is spread so unevenly throughout our provinces.

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[*] Read before the Hamilton Social Hygiene Council.

[†] Pearce Bailey and Roy Haber.

Tredgold gives the percentage of mental deficiency among the general population of England and Wales as 1 in 248, with males slightly predominating. Examination of three million, five hundred thousand recruits for the U.S. army shows a ratio of 6.5 defectives per thousand. The draft age was between 21 and 31, and as mental defect by reason of the high mortality incident to it especially in youth has a greater incidence in groups under 18 years than in those over, it seems evident that the estimates drawn from the draft figures would underestimate the percentage of defectives in the population of the U.S. as a whole.

Supposing .65 does underestimate the percent. over all, and as has been suggested, the true figure is in the neighborhood of .94, the difference between this and 2.5 among our Canadian school children is so great as to call for explanation.

Let me again refer to the definition of mental deficiency which I offered in the first place. It is a condition of arrested or imperfectly developed intelligence as a result of which the individual is unable to benefit normally by teaching.

In Psychological examination the development of the intelligence is measured in terms of agreement with, or deviation from what constitutes normality for a given group. With pre-adolescence one is reasonably safe in grouping by chronological age. As a result, a mental examination of school children, for the purpose of determining fitness to benefit by an educational system designed for average pupils, will eliminate, not only those of marked enfeeblement, but a large number of borderline types as well. The most numerous of these are the defectives who reach the limit of their capabilities around their eleventh year. On leaving school they are absorbed into the ranks of those industrial pursuits which call for a minimum of mental effort. In passing it might be remarked that this type can be greatly helped in early years through special educational methods.

If ability to earn wages were the only measurement of social fitness these defectives could be counted out of our reckoning at the onset.* This theory falls to the ground just as soon as we examine statistics from Psychiatric and V. D. Clinics and Medico-Psychological examination of prisoners. The anti-social are not recruited from the ranks of the unemployable but in the most part from those who over and over again have proven themselves capable of many and varied employments.

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*Tabulation of the results of psychological examination of the U.S. army draft would tend to show the average mental level of the males in the United States to be only 13.2 years.—Waller Mental Hygiene, Vol. 4, No. 1.

Therefore, I submit that employability in the open labor market is not a guide to a person's ability to exercise those inhibitions which are necessary for the protection of society, and very often employability is not even a test of judgment and reasoning capacity. The same warning is necessary with reference to those unstable individuals in whom good intellectual endowment does not compensate for unbalance in the emotional life.

I consider the Canadian figures inclusive as they are of all subdeviates from normal, the safe method of estimating our problem. Whatever this problem may be in terms of percentages the point at issue is not the matter of mathematical exactitude. The fact of importance is that there exists in the community a minority group which contributes out of all proportion to its numbers to every phase of social evil.

A few illustrations will serve to show this. In one hundred cases taken just as they came at the V. D. Clinic, Toronto General Hpl., only eleven were mentally normal. Dr. C. K. Clarke basing his observation upon thousands of cases, has found that 60 per cent. of all prostitutes are feeble-minded, and this class of course is the greatest carrier of venereal diseases. Thirty per cent. is a conservative estimate to place upon the percentage of feeble-minded in our prisons. The speaker can testify from an actual experience, that one jail population, examined by four examiners of whom he was one, was 100 per cent. defective. In a Canadian Juvenile Court Detention Home, 69 per cent. of the children were mentally defective. A study of 100 defective delinquents in one city showed that they had been arrested 1,825 times in five years. They had been sentenced 735 times, aggregating in fixed time 106 years of imprisonment, exclusive of 250 indeterminate sentences to reformatories. Seventy-five of the 100 had a mental level of 10-year-old children, and none of them possessed intelligence above 11 years of age.

If every mental defective became anti-social the problem of prevention would be simplified, because a definite diagnosis of mental defect would be in effect a social prognosis. But the fact of the matter is, that within the mental defective group itself, it is again a minority which is responsible for most of the damage. It is of these that Treadgold has said, "They are inherently incapable of conforming to the legal and moral codes of society." The majority, however, are what might be called "good" defectives.

That is to say they have potentialities for leading placid, harmless, contented lives if the environment is right. By all means recognize this fact, but don't leave it entirely to chance. At present we do this and concentrate our social service work at the wrong end. Society has the right to protect itself against eventualities, and once a child is recognized as mentally handicapped we should make adequate provision for its special training and supervision within the community.

If non-institutional cases were educated according to their capacity, made industrially efficient and taught to acquire correct habits of living, there is no reason why a large number of these unfortunates should not be saved to lives of happiness and usefulness, and society relieved of a great portion of its burden of disease, delinquency, poverty and industrial waste.

We have a valuable starting point for such a system in the excellent auxiliary classes of the public schools, but what are you going to do with these children after they leave school? Even supposing that the Adolescent Act is wisely administered in the case of the mentally handicapped, and the extra two years of school supervision means two years of real training for life, are we going to throw off all responsibility when the school door closes behind the child. If so, then the work done will be wasted.

In order to make a system of after care effective three things are neecessary:—

(1) The special class should be the first link in a co-ordinated plan of activities which shall have for its ultimate goal the stabilizing of the adult-to-be in society. This means that the school authorities must have an outlook, wider than the four walls of their building. Their vision must be projected into society and industry as an integral part thereof. It also means that social service must start just as soon as the child's handicap is recognized. The education of the child's family to an understanding of the child's intellectual, physical, moral, and recreational needs must go hand in hand with the training being given in school hours.

(2) It will be necessary to have a Vocational Guidance and Industrial Placement Bureau which will be in complete harmony with the school on one hand and industry on the other.

(3) It will be necessary to continue indeterminate social service supervision after industrial placement.

I have no illusions regarding the difficulties involved in such a scheme. I do not think that it would be a panacea for all our ills, and I am quite sure that it is very expensive.

Problems involving human beings are always complicated. The dead weight of misunderstanding, resentment, and active opposition that will confront the worker with the families of some defectives will be heart-breaking, but is this any reason for throwing up the sponge? Does not even educational progress have to fight these things? It needs but little experience in a Psychiatric clinic to convince you of the justification of tempering scientific knowledge with tolerance when faced with ignorance rooted deep in Mother love.

The variations of experience and behavior are so great that you will always be reckoning with an unknown quantity when attempting to foresee conduct. Supervision will reduce the factors of chance to a minimum, particularly if the unfortunate has reason to feel that his supervisor is not a counterpart of the terrible Jehovah of old but an understanding friend to whom he can go for help in a crisis, and advance in a period of discouragement.

With reference to the placement of the defective in industry we really know nothing definitely. It was only such incidents of the war as the shortage of labor, and the examination of the wounded for industrial re-training which awakened us here in Canada to the fact that a great deal of the necessary labor of the world was being carried on successfully by persons whom we are wont to grade as mentally sub-standard. I have no sympathy with the Vocational Guidance extremists who dream of labelling every child for some one and particular niche in life. Success involves complex psychological factors of which these enthusiasts are blissfully ignorant. I am not convinced that "job sampling" is a bad thing. I am quite sure that we should not want, and certainly will not be allowed, to take away from the employer, the right to select his own labor. What we ought to do is to study industry from the standpoint of what work is actually being satisfactorily done by what one must think of as the "successful feeble-minded." We know that the absorption of the feeble-minded in industry goes on, in a haphazard manner, but we only make actual contact with this fact when the worker falls out of step. That is to say, we see the anti-social in our clinics and then we find that generally they have an occupational rating of some sort. In the case of some of the war disabled we accidentally discovered mental handicaps although we were primarily conducting a study because of physical injury.

As to the expense, we know absolutely nothing about what it will cost because we do not know what the results will be. We Canadians are generous givers. Our hearts and purses are open to every cry for assistance whether it comes from within our own borders or from the uttermost ends of the earth. I sometimes wish that we would give less and invest more. In the matter of the endowment of research we do not do ourselves credit.

With the feeble-minded in our midst we have a problem which yearly costs us enormous sums because of crime, delinquency and disease, sorrow, poverty and waste. Are you content to carry this burden indefinitely? Or will you control it as you have done with typhoid and are doing with tuberculosis?

One system of control is known to you—segregation. On a large scale this would be very expensive and scientifically wrong. It would be economically wasteful and would do a great injustice to the many who have capabilities for carrying-on in the community. Another solution is the cold-blooded suggestion of sterilization This is not only repugnant to our ideals but is open to other criticisms as well. The alternative is supervision.

The community that has the vision to invest money in this experiment and the patience to forget its investment until sufficient time has elapsed to evaluate the result, will enshrine itself in fame in the field of social hygiene.

I think many of us are becoming dissatisfied with our present patchwork methods.* In a report from the T. G. H. Psychiatric Clinic, it is to be noticed that in 188 cases, 13 can be struck off as being neither definitely insane or mentally deficient. There were 101 mental defectives, 33 of the 188 were recommended for institutional care, 12 for deportation, and 3 children for special classes, a total of 48. One wonders what is going to happen to the other 127? You cannot blame the clinic for this state of affairs, society makes no provision for anything except the diagnosis of non-institutional cases.

In conclusion ladies and gentlemen, may I say a word about immigration. In 1919 60 per cent. of the mentally defective children in the Public Schools of Toronto were of non-Canadian birth. The figures from the Prairie Provinces regarding mental defect and insanity, crime, illegitimacy and dependency (and these three are closely related to mental defect and insanity), all tell the same story. Conditions at our chief ports of entry are greatly improved. Last summer the ratio of admissions refused for reasons of mental defect was larger at Quebec than at Ellis Island. But it behooves us to watch our doors including the side entrances, very closely if we are going to start any house-cleaning within.

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*The views which I have expressed here are becoming pretty general among mental hygiene workers. As far as I know the first published suggestions were made by Dr. Jessie Taft in Mental Hygiene Vol. 2, No. 3.

TO SUM UP.

Those at the lower end of the scale in mental defect do not constitute a grave danger to society. Their condition is recognized and they are institutionalized.

Society suffers most from those whose defects are not apparent on the surface. This type adjusts or maladjusts itself to social laws and moral codes with no other help than blind chance.

When these handicapped individuals are brought to light, it is always after the damage has been done, and diagnosis can do no more than point out the reason for careers of inefficiency, prostitution, vice and crime.

Those who are inherently incapable of social adjustment constitute only a minority of the total defective class. The majority could be saved from errors in judgment if they had training, guidance and supervision.

No single plan will solve a problem as complex as that of human conduct, but the training and supervision of the defective will reduce the present cost to society enormously.

The Victorian Order of Nurses For Canada

MISS M. F. Jackson has been appointed district superintendent of the Victorian Order branch at Ottawa. Miss Jackson is a Scotch woman, took her hospital training in London, England, and her district training in Edinburgh. In addition Miss Jackson holds the health certificate of the London Sanitary Institute for Child Welfare and School Inspection; also a certificate from the London Chest Hospital for dispensary and clinical work. Miss Jackson has also a creditable war record, having seen service in France and England. Prior to coming to Ottawa Miss Jackson was in charge of the Preston branch for one year, where she gave great satisfaction.

In October MacDonald College requested the Chief Superintendent to recommend a Victorian Order nurse who would visit the English-speaking portion of Quebec and lecture on public health nursing in rural communities, this work to be carried on in connection with the University Extension Course. Miss Jessie Forshaw, R. N. Inspector, was loaned them for six weeks. The College supplied a demonstrator, Miss Crane, of the Domestic Science Department. This experiment proved a very interesting one, Miss Forshaw often speaking four hours a day, two in the afternoon and two in the evening. Not only the members of the Women's Institutes but the Farmers' Institutes availed themselves of the opportunity to hear her lectures. Miss Forshaw is well fitted to speak on public health problems as applied to rural districts as she organized the Health Centre at Saanich, B.C., and for one year was provincial organizer for that province. Miss Bessie M. Philp, Director of School of Household Science, in writing to Miss Forshaw said: "When I think of how greatly such work is needed, especially here in our province, I realize how much cause we have to be grateful, not only to the Order for lending you to us, but to you yourself for your interest and hard work. Immediate returns may seem to be few, but the seed once sown, we shall probably never know how far-reaching its effects, nor the final extent of the result."

Miss Edith Haslam has resigned her position as superintendent of the nursing service at Grand Mere, Quebec, and has been appointed Secretary of the Child Welfare Association of Montreal. This city is fortunate in securing the services of this nurse. In addition to her hospital training in Liverpool, England, and the certificate from the Central Midwives' Board Miss Haslam holds a certificate from the Sanitary Institute and was for one year superintendent of one of the Child Welfare centres in London. Miss Haslam has also done nursing in Philadelphia, and Newfoundland, and since coming to Canada has been connected with the work of the Victorian Order at St. John and Grand Mere.

The Chief Superintendent, Mrs. J. C. Hanington, left December 16th on an inspection trip to the Western provinces. Christmas week was spent in consultation with the district superintendent of the Greater Winnipeg branch, Miss Prichard, where a very well balanced and intensive piece of work is being done. From there Mrs. Hanington visited the coast cities, inspecting Greater Vancouver, North Vancouver, New Westminster, the Health Centre at Saanich, and the Victoria branch together with the rural nursing service at Metchosin. On the return trip the Chief Superintendent visited Calgary where the work is expanding to such an extent that they require another nurse. The service in this city is carried on with four nurses and two motor cars. Mrs. Hanington was also in North Bay inspecting the Queen Victoria Memorial Hospital there as well as the local district.

Miss I. M. Cole, Chief Inspector, is making a survey of the Victorian Order nursing service in Greater Montreal.

The London branch of the Victorian Order held its annual meeting, January 26th. This branch is extending its service and is asking for a fifth nurse. The Chief Superintendent attended this meeting and spoke on the work of the Order in general, and the training necessary for nurses who wish to do modern district work. The London branch has an office in the Institute of Public Health, from which Miss Symmonds, the capable district superintendent, directs the activities of the staff. The students taking the course in Public Health at the Western University here obtain the required district observation work under the supervision of Miss Symmonds.

Venereal Diseases in Toronto

STATEMENT OF THE VENEREAL DISEASES ACT ENFORCEMENT IN TORONTO, CANADA, FOR THE YEAR OF 1921.

I.	Cases under supervisicn, *January 1, 1921*		249
II.	Cases brought under the Act		881
	(A) New cases	771	
	(B) Closed cases returned to supervision	110	
III.	Total cases handled		1,126
IV.	Cases closed		649
V.	Cases under supervision *Dec. 31st, 1921*		477
II.	Cases brought under the Act		771

IIA. *New Cases*:—

(a) Reported as suspect cases of venereal disease		429
(b) Reported with diagnosis to secure treatment		342
Syphilis	243	
Gonorrhoea	78	
Syphilis and Gonorrhœa	21	

IIB. *Closed Cases Returned to Supervision*		110
Syphilis	53	
Gonorrhœa	26	
Syphilis and Gonorrhœa	10	
Pending	10	

11C. *Source of Cases Brought Under the Act*:—

	IIA.		IIB.	Total.
	(1) Suspect.	(2) Reported as delinquent re treatment.	Closed cases returned to supervision.	
Courts	190	15	13	218
Clinic	90	96	18	204
Military	28	113	10	151
Jail	16	83	45	144
Individual	35	3	13	51

Police	34	0	0	34
Pub. Hlth Nurse.	21	0	4	25
Other Bd. Health	7	13	0	20
Private Doctor	5	13	1	19
Mercer	0	4	6	10
Reformatory	0	2	0	2
Good Shepherd	1	0	0	1
Social Agencies	2	0	0	2
Totals	429	342	110	881

III. *Cases Handled*			1,126
(a) Diagnosis secured on cases ordered examined		244	
Syphilis	75		
Gonorrhœa	32		
Syphilis and Gonorrhœa	14		
Not venereal disease	123		
(b) Cases placed under treatment		368	

IV. *Cases Closed*		649
Not venereal disease	150	
Never located	109	
Lost	88	
Left city	83	
Under treatment	63	
Apparently cured	46	
Act not applicable	39	
Jail	37	
Mercer	12	
Died	5	
Insane Asylums	2	
Good Shepherd	2	
Women's Farm	4	

STATEMENT OF CASES DEALT WITH UNDER THE VENEREAL DISEASE ACT WHILE IN CUSTODY, YEAR 1921.

Total number of cases examined during 1921		1,628
Jail	150	
Women's Farm	101	
Men's Farm	1,377	

Result of Examination:—

Syphilis	83
Gonorrhœa	76
Chancroid	0
Syphilis and Gonorrhœa	16
Negative	1,453

Number of cases ordered detained for treatment	195

New cases	175
B.V.D.P.A.	15
Examined outside	5

Summary:—

Cases in custody Jan. 1st, 1921	38
" ordered detained during year	175
" " " B.V.D.P.A.	15
" examined outside and ordered detained for treatment	5
	233

Cases released with order to report for treatment	118
Cases released as cured	23
Transferred to Burwash	2
" " Mercer	7
" " Guelph	9
" " Kingston	7
" " Haven	1
Released before order was received	11
Deported	4
Released to go outside city	5
Died	1
Asylum	1
Number detained in custody, Dec. 31st, 1921	44

Number of cases brought into court charged with breach of the V.D.P. Act—January-December, 1921	197

Disposition of cases—

Withdrawn (On producing certificate of examination or treatment).	164
Adjourned until called on	3
Fined	29
Sentenced	1

Social Background

Standard Recommendations for the Relief and Prevention of Unemployment

Collated by the American Association for Labour Legislation, New York City.

1. ORGANIZATION.

Organize the community as long as possible before unemployment becomes acute, including any necessary reorganization or coordination of existing agencies. The appointment of an unemployment committee by the governor or by the mayor, if improper political influence is guarded against, insures semi-official standing and greter prestige. Include in the membership *all classes concerned,* such as employers, workingmen, public officials, social workers, civic leaders and representatives of churches, lodges and women's clubs. To carry out preventive measures, *permanent organization,* not temporary activity during a crisis, is essential.

2. EDUCATION.

Upon the basis of careful information gathered from employment offices, relief agencies, and all other available sources, *bring the facts of the unemployment situation home to every citizen.* Emphasize civic and industrial responsibility. Avoid "the ostrich policy of refusing to face the facts on the one hand and hysterical exaggeration of facts on the other."

3. EMERGENCY RELIEF.

Avoid duplicating the work of existing organizations. Do not advertise the existence of large relief funds or other provisions for relief without work, or give indiscriminate relief to able-bodied men. Except as a last resort, discourage the starting of bread lines, bundle days, soup kitchens and similar measures. *As far as possible supply aid by means of employment, at standard rates,* but on part time, to encourage early return to regular occupation. Open workshops and secure odd jobs from householders. Do not provide work for housewives who are not ordinarily wage-earners, instead of for their jobless husbands. For the homeless, provide a municipal lodging house, with a work test, or a co-operative lodging house under intelligent supervision and leadership. Abolish the "passing on" system, but do not make provision for non-residents at the expense of resident unemployed family men.

4. SEPARATION OF UNEMPLOYARLE AND UNEMPLOYED.

Differentiate the treatment of the unemployable from that of the unemployed. Develop appropriate specialized treatment based on the continuous work of trained social investigators for the inmates of the municipal lodging house. Provide adequate facilities for the care and treatment of the sick, the mentally defective and the aged. Develop penal farm colonies for shirks and vagrants, training colonies and classes for the inefficient, and special workshops for handicapped and sub-standard workers.

5. INDUSTRIAL TRAINING.

Provide industrial training classes with scholarships for unemployed workers.

6. EMPLOYMENT EXCHANGES.

If one is not already in existence, *open an employment exchange to centralize the community's labour market,* using private contributions if necessary in the initial stages. Beware of poor location and insufficient appropriations, of political appointees and general inactivity. Do not start temporary philanthropic exchanges in times of depression if there is a public bureau which can be made efficient. Stimulate the *co-operation of citizens to improve the existing public exchange* and to co-ordinate the work of non-commercial private bureaus. Secure adequate legislation establishing permanent state or municipal bureaus, extending joint city-state-federal control in their administration, and regulating private agencies. Work for federal legislation and appropriations to develop a *national system of employment exchanges.*

7. PUBLIC WORK.

Start or push forward special public work, using private contributions in time of urgent need if public funds cannot be obtained. This should not be "made" or unnecessary work, but needed public improvements in as great variety as possible, so as to furnish employment to other sorts of persons besides unskilled labourers. Give preference to resident heads of families if there is not work enough for all applicants. *Employ for the usual hours and wages,* but rotate employment by periods of not less than three days. Supervise the work carefully and *insist upon reasonable standards of efficiency.* To avoid the difficulties of emergency action make systematic plans for the regular concentration of public work in dull years and seasons by special provisions in the tax levy or by other appropriate method. Urge the repeal of laws restricting cities to contract work. Secure the aid of state and national officials in stimulating local action. *Steady the employment of the regular force,* retaining employees on part time in preference to reducing their numbers.

8. REGULARIZATION.

In times of depression, urge the use of regular employees in making repairs and improving the plant, and the policy of part time employment rather than reduction in numbers. Do not rely upon general appeals to "Do it now," "Hire a man," and the like, addressed to the public-at-large without definite suggestions as to method. *Rouse employers to the importance of the problem and the advantages of regularization.* Stimulate careful planning for this purpose by experts as part of the *regular routine* of business management. Encourage the formation of employment managers' associations.

9. UNEMPLOYMENT COMPENSATION.

Work for the establishment by legislation of a system of unemployment compensation, supported by contributions from employers as the most just and economical method for the proper maintenance of the necessary labour reserves and as supplying the financial pressure needed to secure the widespread regularization of industry.

ONTARIO

The Provincial Board of Health of Ontario

CASES AN DEATHS OF COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE BY LOCAL BOARDS OF HEALTH FOR THE YEAR 1921.

COMPARATIVE TABLE.

	1921		1920	
Diseases	Cases	Deaths	Cases	Deaths
Smallpox	3,787	18	5,169	69
Scarlet Fever	4,564	126	5,130	150
Diphtheria	6,313	525	5,940	654
Measles	2,851	40	15,423	210
Whooping Cough	2,357	131	2,042	210
Typhoid	725	184	713	182
Tuberculosis	2,286	1,500	2,259	1,662
Infantile Paralysis	81	20	37	14
Cerebro-Spinal Meningitis	79	66	77	67
Influenzal Pneumonia	355	159	x24,284	2,416
Primary Pneumonia	....	2,325	....	3,482
	23,398	5,094	61,074	9,080

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xEpidemic in February and March.

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR YEAR 1921.

COMPARATIVE TABLE.

	1921	1920
Diseases.	Cases	Cases
Syphilis	2,477	1,740
Gonorrhoea	2,554	2,158
Chancroid	61	82
	5,092	3,980

COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF DECEMBER, 1921.

COMPARATIVE TABLE.

	1921		1920	
Diseases	Cases	Deaths	Cases	Deaths
Smallpox	128	0	555	5
Scarlet Fever	600	16	711	17
Diphtheria	743	60	778	74
Measles	94	2	973	7
Whooping Cough	95	9	335	16
Typhoid Fever	28	5	59	25
Tuberculosis	174	139	181	114
Infantile Paralysis	1	0	7	3
Cerebro-spinal Meningitis	5	3	7	7
Influenza	4	4	45	12
Pneumonia	....	215	....	242
	1,872	453	3,651	522

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH FOR DECEMBER, 1921.

COMPARATIVE TABLE.

	1921	1920
	Cases	Cases
Syphilis	183	229
Gonorrhoea	230	269
Chancroid	5	9
	418	507

The health of the Province should be considered most satisfactory as indicated by reports made by the local boards of health of communicable diseases for the month of December last, as compared with the corresponding month of December, 1920.

The total decrease is 1,779 in the number of cases and in deaths 69.

Several of the diseases show a decrease in cases as follows: Smallpox 427, scarlet fever 111, diphtheria 35, measles 879, whooping cough 240, typhoid 31, influenza 40.

Feb. 1922

Public Health Nurses in Canada

The following table has been compiled by a committee of the Public Health Section of the Canadian National Association of Trained Nurses from reports submitted by the members of the Provincial Associations. The figures are approximate, only, but it is hoped that a corrected statement will be possible in time for the annual convention in Edmonton. The population figures also are estimated, as the final returns from the Dominion census are not available:—

Provinces with estimated Population		Depts. of Public Health	Depts. of Education	Dept. of Soldiers' Civil Re-establishment	Victorian Order of Nurses	Other Private Agencies	TOTALS
Prince Edward Island	88.536	0	0	0	0	2	2
Nova Scotia	524.597	14	8	3	24	14	63
New Brunswick	388.092	2	1	2	10	11	26
Quebec	2,349.067	44	0	3	55	58	160
Ontario	2,929.054	168	99	23	99	75	464
Manitoba	613.008	70	14	4	21	20	129
Saskatchewan	745.010	21	18	3	5	10	57
Alberta	581.995	21	0	2	9	5	37
British Columbia	490.600	4	17	2	19	17	59
Yukon	4.162	..	..	..	..	..	..
Total	8,714,103	344	157	42	242	212	997

News Notes

Over 7,000 requests for the Annual Report of The Canadian Association for the Prevention of Tuberculosis were honoured before Christmas, 1921. This publication has a striking chart as a frontispiece entitled: "Forty years of ups and downs in the Province of Ontario," showing a tuberculous death rate of 149 per 100,000; population in the year 1900, as the highest, and 78 per 100,000, as the lowest in 1920. The Secretary's report records the encouraging progress made in this very essential work. The report of the Federal Department of Agriculture, on its function, as assisting municipalities to obtain their milk supply from herds proven by the Tuberculin test to be free from tuberculosis, shows increasing numbers of communities protected. No shortage of milk occurs and no increase in price has yet resulted in a community taking on the scheme. The Standardisation of herds for breeding purposes, is proceeding apace, limited only by the staff and finances available. The stockmen are very keen for its application, as evidenced by the 657 herds now under departmental test.

The Federal Department of Soldiers' Civil Re-Establishment reports of their Board of Sanatorium Consultants are synopsised. Dr. Lecler's report upon Paris Tuberculosis Conference, also gives an excellent review of the marked advances being made in France, where 16,500,000 francs were expended in 1919, alone.

Several interesting papers presented at the Toronto meeting together with the record of work of thirty-seven Institutions, in the different Provinces, forms a setting for President-elect Cook's optimistic address as to further activities of the Association.

An abbreviated Directory of 396 Canadian Agencies for the diagnosis and treatment of Tuberculosis, printed by the courtesy of the Federal Department of Health, is enclosed with each report, and shows 4,057 Sanatorium beds available. The large number of Public Health Nurses established by Provincial Boards of Health and Red Cross Society efforts, is astonishing.

The Secretary of The Canadian Association for the Prevention of Tuberculosis is scheduled for visits to the three Maritime Provinces during February. It is planned that meetings be held with the

Provincial Health Officials and the Executives of the different tuberculosis treatment and diagnostic centres. Further, programme arrangements for joint congress in St. John, N.B., June 6th, 7th, 8th and 9th will be formulated.

A new, attractively printed folder called "In This Sign," "Ce Par Signe," has just been issued for use in communities endeavoring to establish Public Health Nurses and other increased Public Health activities. It is concise and has been very favorably commented upon. It is issued in both French and English. Copies as samples, or in quantities may be obtained, free of charge, by writing the Secretary—The Canadian Association for the Prevention of Tuberculosis, Bank Street Chambers, Ottawa.

Sunday, February 19th, is Special Welfare Sunday in Toronto churches. At the request of the Toronto Social Hygiene Council the subject of Social Hygiene is stressed. A great deal of literature on the subject will be distributed.

The annual meeting of the Canadian Public Health Association will be held 6th, 7th, 8th and 9th June, in St. John, New Brunswick. Plans are being made to make it a very representative meeting and all those who can possibly attend should make arrangements to do so.

Arrangements are being made for the annual meeting of the Canadian Association for the Prevention of Tuberculosis to be held at the same time as the C.P.H.A. is meeting.

The Canadian National Council for Combating Venereal Diseases will also hold its Annual Meeting in St. John.

The recent Farmers' Course at the University of Toronto has proved to be a great success from every aspect, the students showing the keenest interest in the lectures and demonstrations given. The talks on Public Health and Sanitation were especially well attended and the students seemed to appreciate the need for greater effort along health lines.

An interesting feature of the Public Health Course was the showing of the film "An Equal Chance," depicting a Public Health Nurse actually at work, and the value of the services she renders to any community. Requests were made by all the students for copies of the Public Health Almanac and other health publications.

The film "How Life Begins," which has been prepared to further the interests of Social Hygiene, is becoming increasingly popular. Recently Dr. R. R. McClenahan of the Provincial Board of Health of Ontario exhibited this film before the senior medical students at Western University, London, Ont., and to a group of medical practitioners.

Miss Moore, Social Service Nurse of the Board, has also been busily occupied recently in exhibiting the film before audiences of women in Toronto and outside points. She has within the past week or two shown the film in Brantford, London, and Kitchener, and everywhere it was much appreciated.

The Health Almanac of the Provincial Board of Health of Ontario has proved to be a most popular publication. Hundreds of requests for copies have come from all over the Province, and the mailing room of the Board of Health has been nearly swamped of late with outgoing packages. There are still sufficient numbers of this Almanac left to supply those who have not yet seen it, and a postcard addressed to the Chief Officer of Health, Spadina House, Toronto, will bring to your door as many copies as you can distribute to your friends and acquaintances.

The Information Bureau of the Division of Industrial Hygiene, Ontario Provincial Board of Health, is becoming more and more useful. It offers to Health Officers, Social Welfare Associations, industrial physicians, sanitary engineers, employers and others an easy means of keeping in touch with the latest developments of Industrial Hygiene. The subjeects covered are roughly industrial medical service, industrial sanitation in all its branches, occupational diseases, fatigue, and health legislation. Such a bureau is invaluable as making available the results of scientific advances and of practical experience in other countries.

Editorial

THE PREVENTION OF DIPHTHERIA.

DR. W. H. PARK, Director of Laboratories of the Department of Health of New York City, according to the "Nation's Health," reecently submitted a report which showed that the cost of a case of diphtheria is from fifty dollars in a contagious disease hospital to more than one hundred dollars when the case is cared for at home. The cost of the cheapest funeral Dr. Park set down as seventy-five dollars. During the first six months of 1921 there were 10,722 cases of diphtheria reported in New York City and 611 died. According to the estimate the 10,722 cases cost $536,000 and the cost of the 611 funerals was $45,826, making the total cost resulting from diphtheria during the six months, $581,825.

The report goes on to suggest that the obvious remedy is to give the Schick test to ascertain the susceptibility of the individual and the elimination of susceptibility by protective treatment. The cost of protecting one child is twenty-five cents. The cost of protecting every one of a million school children would be $250,000. A report on how far the organization of such protective work has progressed in Canada would be useful. Correspondence on the subject is invited.

An outbreak of smallpox which occurred in a certain district of India in 1878, carried off 58,000 natives who did not believe in vaccination. Finally, one tribe, the Thakers, who practised infanticide, allowed their female babies to be vaccinated, thinking it an easy way of getting rid of their surplus offspring. Later came a second visitation of smallpox and killed nearly all of the unprotected male children, leaving the vaccinated girls.

Current Literature Dealing With Venereal Diseases

These abstracts are available through the courtesy of the American Social Hygiene Association.

A TECHNIC OF INTRAMUSCULAR (EPIFASCIAL) INJECTION. By John H. Stokes, M.D., *Medical Record,* April 30, 1921.

The author's experience with the injection of large quantities of solutions (100 c.c. or more) into the buttocks directed his attention to a phenomenon which suggested that the contents of the so-called intramuscular injection, when properly introduced, are deposited not within the body of the gluteus maximus or between its fasciculi nor yet within the subcutaneous fat, but in the areolar tissue on the upper surface of the fascia forming the extension of the fascia lata covering the glutens maximus. Following is an abstract of the pertinent facts:—

1. *Position of the Patient.* Injections into the buttocks are best given with the patient lying prone on a table. Relaxation should be complete. His legs should be placed in a position of moderate internal rotation "toed in."

2. *Instruments.* The 2 c.c. glass Luer syringe and three lengths of needles, one for very thin or flabby buttocks; one for medium, and one for fat buttocks are required.

3. *Point of Injection.* Injections into the buttocks should, in general, be given into the upper outer quadrant near its inner angle.

4. *Technic of Injection.* After sterilization with alcohol, the syringe is grasped with the right hand, while the left hand, placed flat on the buttocks, presses moderately and flattens and fixes the tissues. The needle is introduced to its full length by a quick stroke at an angle of 20 degrees from the vertical in a sagittal plane, with a slight inclination inward.

5. *Testing for the Presence of the Needle in a Blood Vessel.* As soon as the needle is introduced, the syringe is steadied with the left hand while an attempt is made to aspirate by pulling upward on the piston with the right hand. As soon as it appears that nothing can be aspirated from the deep tissue about the needle point,

the contents of the syringe may be injected, the right hand maintaining the proper angle of the needle. The flow of injected material should be free and the needle point should "feel" as if stuck in a board.

Attention is called to several details which contribute to a successful technic. The buttocks should be used in alternation for injection. Needle points should be of a rather long bevel and exceedingly sharp. The movement of the needle should be carefully controlled.

If a Needle Breaks. Presence of mind must be maintained. Do not exclaim or discuss the situation with the patient or nurse. Keep the left hand in position until an attempt can be made to recover the needle. The fragment just beneath the skin may sometimes be recovered by a small incision and with the aid of a hemostat. If the left hand is released from the buttocks, the needle is lost and can then be identified only by the roentgen ray and removed through an extensive surgical incision.

In regard to the use of insoluble suspensions for intramuscular injection, concentrated suspensions requiring small amounts for each injection are often less painful than thin suspensions. A satisfactory test of complete suspension consists of shaking until none of the suspension can be recognized in the groove at the juncture of the sides and bottom of the bottle when the bottle is inverted.

6. *Treatment of Complications.* If blood is obtained on aspiration after the introduction of the syringe, even in the minutest amount, the syringe should be withdrawn and the procedure repeated 1 cm. or more from the site of the unsuccessful attempt. To continue the injection in the face of a return of blood or even a tinged suspension, may be attended by fatal consequences from embolism. Heat, applications, and massage will relieve superficial indurations or nodules.

CONTROL OF VENEREALLY DISEASED PERSONS IN INTERSTATE COMMERCE. By David Robinson. *Public Health Reports,* Vol. 36, No. 36, September 9, 1921.

The Federal Government has but little power to control the spread of diseases in the states. It has, however, passed laws which aim to prevent the spread of contagious diseases in interstate commerce. In addition, Congress has authorized the Secretary of Treasury to promulgate regulations in regard to it. Under this authority amendment No. 7 was added to the Interstate Quarantine regulations, which amendment regulates interstate travel of venereally infected persons. It is not the object of the federal or state health officers to prevent venereally diseased persons who go to another state in search of medical treatment; but the amendment is aimed at diseased prostitutes, procurers, vagrants, who not only neglect treatment but deliberately expose others. Some states have adequate follow-up systems and notify other states directly or through the Public Health Service when an infected person ceases treatwent without permission and goes to another state. No difficulty has been experienced in inducing such persons to resume treatment. Any persons convicted of violating the Interstate Quarantine Regulations who come from communities in which there is no provision for treatment, will be detained and treated at the expense of the United States Government. Much can be accomplished in controlling venereal diseases if a strong co-operation exists between the health officers of the various states. Another strong legal measure is the provision of state laws requiring that physicians report names and addresses and other facts relating to venereally infected patients who refuse to continue treatment or who are likely to spread the disease. Many physicians have been able to induce patients to continue treatment simply by calling attention to the existence of these laws.

American Social Hygiene Association, January 15, 1922.

A Preliminary Report on the Treatment of Syphilis Complicating Pregnancy. By Alfred C. Beck, M.D. *The American Journal of Obstetrics and Gynecology,* Vol. II., No. 4, October, 1921.

The work here reported was carried on in the Department of Obstetrics and Gynecology of the Long Island College Hospital. Thirty-two cases of syphilis complicating pregnancy were followed. The following is a brief summary:

The history and physical examination were of little value in making the diagnosis of syphilis. They aided in only six, or 18.7 per cent. of the cases.

The history of the previous pregnancies was helpful in sixteen, or 61.5 per cent. of the multiparae.

Eight unquestionably syphilitic multiparae carried all of their previous pregnancies to the period of viability and gave birth to living infants, 34.7 per cent.

This high percentage of living infants born to untreated syphilitic mothers emphasies the need for the routine prenatal Wassermann test and microscopic examination of every placenta.

If private patients object to the Wassermann test the placenta at least may be examined in order that early treatment in latent cases may be inaugurated.

The routine Wassermann test is a most valuable aid to prenatal work. This test, however, at times is misleading, for a positive reaction during pregnancy occasionally becomes negative after delivery, even though no treatment has been given.

Salvarsan may be given at any stage of pregnancy and its value is indicated by the following results:

Eleven cases that received one to three injections gave birth to five living nonsyphilitic infants and three infected ones that have done remarkably well under treatment.

Seventeen cases that received five or more injections were delivered of fourteen nonsyphilitic infants and one syphilitic infant and the infection in the latter has been easily cotrolled by treatment.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society.

Symposium on Child Welfare.

Prepared by the Academy of Political and Social Science. The first part of the volume deals with problems of welfare involving all children—life, health, nutrition, dental hygiene and mental hygiene; the second part with socially handicapped children; while the third section comprises two articles devoted to the legal and administrative aspects of the child welfare movement. ("The Annals of the American Academy of Political and Social Science," November, 1921.)

Studies in Child Welfare.

A series of studies on child welfare by the United States Children's Bureau:

1. Health problems of mother and infant.
2. The development, general hygiene and feeding of the child.
3. Problems related to safeguarding the health of the child.
4. Child mentality and management.
5. Play and recreation.
6. Children in need of special care.
7. Child labour.

Sight Conservation Among School Children.

The Bureau of Child Hygiene in New York City has nine clinics for the conservation of eyesight. By far the most common cause of loss of vision is progressive near-sightedness, a condition that shows marked improvement with constant and careful attention. It is interesting to note the large number of children whose supposed mental defect miraculously disappeared when their vision was corrected by proper eye glasses. ("School Health News," Dec., 1921, p. 1.)

English-speaking Conference on Infant Welfare.

Report of the proceedings of the second English-speaking conference on Infant Welfare held in London, England, July, 1921.

Prevention of Blindness in Babies.

Pamphlet in English and French of the Department of Health, Canada. Copies of this pamphlet may be obtained on application to the Secretary, Department of Health, Ottawa.

Income and Infant Mortality.

("Toronto Health Bulletin," Dec., 1921, p. 4.)

Public Health Nursing in Nova Scotia.

A resume of the past year's work by the 13 public health nurses supplied by the Nova Scotia Red Cross to the Department of Health of that Province. ("Quarterly Bulletin," Dept. of Public Health, Nova Scotia, Jan., 1922, p. 7.)

The American Nurse; Her Past, Present and Future.

("The Johns Hopkins Nurses Alumnae Magazine," August, 1921, p. 136.)

The Nursing of Venereal Diseases in Children.

("The Trained Nurse and Hospital Review, Jan., 1922, p. 31.)

Smallpox and Vaccination.

The large proportion of unvaccinated children in England led the Ministry of Health to issue this warning of the possible recurrence of an epidemic of smallpox. ("Ministry of Health Report," No. 8).

Birth Rates in U. S. A., 1920.

("United States Public Health Reports," Dec. 23rd, 1921. p. 3142.)

Civic Control of Tuberculosis.

("The Journal of State Medicine," Dec., 1921, p. 372.)

Diet and Nutrition.

A report of the British Ministry of Health on diet in relation to normal nutrition.

Public Health Aspects of Diseases of the Heart.

("The Medical Officer," Dec. 29th, 1921, p. 251.)

The Public Health Journal

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Law and Morality

By J. W. McFadden, M.A., LL.B.,

Assistant Crown Attorney for the City of Toronto.

OUR present system of Jurisprudence is not something which has been handed down to us fully formed and developed. It has been a gradual growth, a tree whose roots stretch back unseen through dark and misty centuries. Primitive man had no idea of law or justice as we understand these terms. He had an instinct for revenge, a life for a life. Even in Roman law this idea of private vengeance prevailed. The kinsman who did not avenge his kinsman's death was the accursed of both gods and men. He could not share in the inheritance. Mankind has reached a higher plane when this idea of private vengeance is controlled and the idea of compensation for injuries has arisen. A much higher plane is attained when the personal element has disappeared and when the State as the guardian of its citizens considers wrongs done to them as being done to itself, prescribes penalties for the doing of these wrongs and enacts means of enforcing these penalties.

Law has thus passed from being the sole concern of the family of the injured to being the sole concern of the State. In the realm of international law we are at the family stage, the stage of private vengeance. A nation for a wrong, real or imaginary, takes up the sword against nation just as primitive man rushed against primitive man. Can we not now discern the clouds that hang dark and heavy over a saddened world breaking before the glorious dawn which ushers in the day when nation shall no longer march against nation, when a federation of nations will consider wrongs done to one of its humblest members as done to itself, will pres-

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Read before the Hamilton Social Hygiene Council.

cribe penalties for the doing of such wrongs and enact means of enforcing these penalties? A great forward march by the nations of the world.

"Till the war-drum throbbed no longer, and the battle flags were
furled
In the Parliament of men, the Federation of the World."

The enforcement of law has also developed. Law itself resembles a strongly built and well-tested engine capable of carrying safely its load of human freight through mountain defiles and over swampy marshes. Without, however, very careful drivers, hard-working and conscientious roadmen, it would never accomplish its journey. For its effectiveness law depends upon those who administer it. Mere procedure in court is as old as the days of Homer. There is a trial scene depicted on the shield of Achilles. What has changed so much in the last century has been the attitude of judges and counsel, of laymen who make the laws and of police officials who directly enforce the laws, towards the violators of the law.

About ninety years ago Henry Hawkins, afterwards the famous Lord Brampton, looked out of a window in the town of Bedford. He saw a cart drawn by a farm horse and led by a working man coming slowly up the village street. Leaning on the tail board of the cart were a middle-aged labourer and his wife. When the cart approached the window at which young Hawkins stood he saw what appeared to him to be a bundle thrown upon the straw in the cart. This bundle represented the remains of a young boy of 17 years of age, the only son of the labourer and his wife, who had been hanged that morning in Bedford Jail for setting fire to a stack of corn.

This was not an isolated occurrence. A few days ago I read the Crown Calendar for the Lincolnshire Lent Assizes holden at the Castle of Lincoln on Saturday, the 7th of March, 1818. On that Calendar there was not a single charge for which under our present Criminal Code the judge could inflict death, or even imprisonment for life. There was not a single case of rape, murder, treason, or sedition. Yet of seventeen persons against whom the Crown secured a conviction, no less than fourteen were sentenced to death.

George Crow, aged 15, was charged on suspicion of having entered the dwelling house of S. Holmes about 7 o'clock in the morning, breaking open a desk and stealing three £1 notes, 3s. 6d. in silver, and a purse. Sentence death.

Thomas Young, aged 17, was charged with having about 11 o'clock at night, entered the dwelling house of John Ashlin, with intent to commit a robbery. Sentence death.

John Marriott, aged 19, was charged with maliciously and feloniously setting fire to a stack of oats. Sentence death.

All through the Calendar, like a recurring decimal, appeared the dread words, "Sentence death." Even for young women there was no pitying tear.

Elizabeth Eno, a young woman, aged 19, was charged with having in company with William Walker burglariously entered the dwelling house of William Trentham, stealing a sum of money in gold and silver, several county bank notes, and a red morocco pocket-book. Sentence death.

To-day George Crown would have been sent to a Juvenile Court, been examined by a psychiatrist and placed under observation. His environment and his family history would have been all placed before the Court. He would in all probability have received a light sentence, perhaps a lecture and been sent home in company with his father. What a change from the days of George the III! Yet in days when law was so administered there lived the great souled Johnson and the gentle Goldsmith, the eloquent Burke and the learned Gibbons, Reynolds with his incomparable brush and Garrick with his incomparable mimicry. All of them great men, most of them good men. Carlyle would have made short work of criminals. He would have swept them into a bag and thrown them over London bridge. Brotherhood of man! The sage of Ecclefechan would have no brotherhood with such.

The present attitude towards law offenders cannot be more clearly stated than in the words of one of our own judges: "To allow young men and women and adults of both sexes to appear before magistrates and judges and to be tried and condemned without any effort being made to ascertain the cause of their downfall, their previous environment, their mental condition, is, in the light of modern thought, a most unwise and costly mistake. It judges the mentally defective and others as if he or she was entirely responsible and it ignores the costly burden upon the State caused by term sentencs which permit, after an interval, the criminal to return to society to again resume his career of vice. It is the duty of every judge to endeavour to deal with crime so as not only to punish the particular offence, but to give to the condemned person an opportunity to profit by his experience and to reform."

"The cause of their downfall"—"Ay, there's the rub"; the friend whom we have known for years does something at which we stand aghast. It is incredible. How then can we reach the secret springs which cause the youthful house-breaker to pursue his life of crime or the prostitute to ply her trade?

Not only has this personal interest in the offender permeated the bench. It has also permeated our police department. A city detective informed me that he had certain young men in his district whom he was looking after. They were the class who were likely to drift into crime. He was taking an interest in them and trying to keep them on the right path. Preventing crime rather than detecting the perpetrators of it.

Morality is also a gradual growth. I am using this term in its widest possible meaning. As embracing all the relationships by which man comes into contact with his fellow man or sister woman, commercial morality, sexual morality. social morality. No one is so presumptuous as to believe that we have attained, or are already perfect. With Rabbi Ben Ezra we proceed along life's highroad believing

"The best is yet to be,
The last of life, for which the first
was made."

What relationship exists between law and morality? Law is a record of the gradual development of the moral conscience of the nation. Law is the offspring of morality. Morality is not the child of law. If all the ills which affect mankind socially could have been cured by placing a few lines on our Statute Book, this world long ago would have been a Paradise of Angels. It is only, however, when men and women have fought valiantly and long, enduring persecution, buffeting derision, that in the fullness of time the true child law is born. Slavery was not abolished in America until the American conscience had been aroused and until young and old America had read "Uncle Tom's Cabin." The vile and iniquitous system of imprisonment for debt was not abolished in England until the English national conscience was awakened and all Englishmen had read the words of Charles Dickens.

Recently "The Venereal Diseases Act" was placed upon our Statute Book. What hath gendered it? The social conscience of the nation aroused by the awful disclosures of war days. What was brought so vividly before the nation was the utter loathsomeness of the disease. The infection of the innocent child and the newly-wed bride. What did not enter into the social conscience was a higher ethical moral standard. To-day the law shows this defect. This Act is not perfect. It gives the Medical Officer of Health tremendous power. Under it without any trial he can hold a person in jail until such times as he is satisfied he or she is free from disease. This is contrary to the basic principles of English law. The Legislature contemplated the Medical Officer of Health detaining persons infected but it provided no detention homes. By an Order in Council the Lieutenant-Governor designated jails as places of detention. What was intended to be treated as a disease is treated as a crime. The British people did not go so far. All they did was to set up clinics and afford free treatment.

True law being the child of morality the aim and object of those who strive for better citizenship should be to educate the moral conscience of the people. Nothing is more fallacious than to imagine that we shall behold a new heaven and a new earth, if we get shorter hours of labor, better housing conditions, and if we fail to get along with these, a higher social ideal. History shows this. Experience proves it. Statistics confirm it. There is no necessary relationship between poverty and immorality. The Irish nation is the poorest nation in all the galaxy of nations which form the British Empire, yet in the poorest part of poor Donegal, where father, mother, children, cows, and hens all live within four walls, incest is practically unknown and illegitimacy is lower than in any other country. A high moral ideal is there. Of the crowd of girls who come to our cities annually, the best protected are probably the domestic servants. They have a house to which to go, a comfortable room and reasonably good clothing. This class, however, furnishes by far the greater number of prostitutes. In a Toronto institution out of 75 cases examined 36 were domestic servants. Factory operatives came next, a total of 12. This is not confined to Toronto. In Bedford jail, an institution to which prostitutes are committed by the New York State, out of 647 sentenced there, 37.56 per cent. were domestic servants. Fancy operatives came next with a percentage of 17.62. Those who gave as their reason for their downfall the fact that they were out of work amounted to only 14.27 per cent. The American born white is better housed and has a better environment than the foreign born white, yet the American born white contributes more to the ranks of prostitution than the foreign born.

If law is a record of the gradual development of the moral conscience of the nation does our present criminal law regarding sexual offences represent the moral conscience of the nation? An

Englishman writing in 1912 said: "We all disapprove of prostitution but we do not all approve of purity." Whether this can be said of the Canadian people or not you are judges.

Our criminal law does not prohibit impurity. Adultery is not a crime in any province of Canada save one: the province of New Brunswick. In England it was punished by the Ecclesiastical Court. On their abolition it was not enacted as a criminal offence. Illicit sexual intercourse between consenting parties over fourteen years of age even for gain is not prohibited. This is qualified in effect by holding that in some relationships consent cannot be given, or if given is not fairly obtained, the relationship of guardian and ward, of certain employers and their employees, of parent and child, or step-child, or foster child, of persons under contract of marriage providing the woman is under twenty-one years of age and of chaste character and the man is over twenty-one years of age.

Our criminal law also prohibits any one having illicit connection with a girl of previous chaste character under sixteen years of age and also prohibits anyone over eighteen years of age seducing a girl of previous chaste character under eighteen years of age.

This latter criminal prohibition was passed last year. It puts the young man and young woman on an equal basis. If the young woman is protected until eighteen years of age from giving way to passion so is the young man. Some organizations aim at raising what is known as "the age of consent" to twenty-one years. If so, the age of consent for young men will also be raised to twenty-one years. Should they succeed the last state of our law will be infinitely worse than the first.

The keeping of a bawdy-house has been a criminal offence for over half a century. Not because the law considered it immoral, but because the traffic to it made it a nuisance. It is still in our Criminal Code indexed under the head of nuisances.

Prostitution is not a crime unless a woman is living for the most part by that method. The prostitute is not a danger to the community save as a spreader of disease. She is ostracized. The real danger to society is the semi-prostitute, the woman who purchases preferment in factory and office over more industrious and honourable girls by selling herself to those from whom she can gain preferment.

If Law is a record of the gradual development of the social conscience of the nation what has been the fruit of the labor of all those, who for the past quarter of a century have been struggling for a better condition? What has been the effect of all the speeches, pamphlets, resolutions, sermons, and conferences that have aimed at a better social condition?

In our own province we are now enjoying part of the harvest. On the 1st of October, 1920, "The Mothers" Allowances Act" came into force. By this a widow with dependent children or a mother whose husband is an inmate of a hospital for the insane in Ontario or whose husband is permanently disabled and incapable of contributing to the support of his family may receive a monthly allowance from the Government toward the support of her children. A most beneficient Act—one which has caused many a widow's heart to leap for joy.

The year just closed has seen "The Parents Maintenance Act" passed. This Act made a son or daughter with means liable to contribute to the support of their dependent parents. It also provided a summary method of enforcement.

In the same year there was also passed "The Children of Unmarried Parents Act." By this Act the father of an illegitimate child was made liable to support the child until it had attained the age of sixteen years. He was also liable to provide for the expenses of confinement and for the care of the mother three months preceding her confinement and a reasonable time thereafter.

England, that slow-moving, conservative, old-fashioned country, has years ago outstripped us in her benevolent social legislation.

What further laws is the awakened social conscience of the nation going to enact?

There will be the legal recognition of the feeble-minded. At present our criminal law holds every man and woman responsible for the acts done by them, unless he, or she, is proved to be insane. This unfortunate class of feeble-minded persons will not be punished for what they were not wholly responsible for. They will be looked after by the State in institutions which will give them the utmost liberty in keeping with the safety and welfare of the rest of the community.

Divorce will be as accessible to the poor as to the rich. What justification can society to-day give for granting a wealthy woman the privilege of obtaining a divorce and having a home and children and refusing to grant the same privilege to the poor? Many young women in our cities abandoned by profligate husbands have after some time, recognizing the hopelessness of obtaining a divorce decided to live in what we now describe as immorality. The Angel who records the sins of mankind will probably, as in my Uncle

Toby's case, drop a tear upon such entries and wipe them out forever.

There will be a great industrial change. During the past century we have passed from an agricultural age to an industrial. Formerly in the stillness of evening the weary traveller could hear the metallic click of the cobbler's hammer and the humming of the spindle from a hundred cottages. Science with machinery in its train has changed all that. No longer are our workmen brought up in the country air taking their pleasures on the village green.

"Sweet Auburn, thy sports and pastimes charm no more."

We have passed completely to an industrial age. What has this great industrial age done for the common man, for the mothers of the nation? It has brought the slum, the one-room tenement, the monotony of machine employment, the impairment of health, the dread spectre of unemployment. Soon, very soon, the nation is going to demand that Industrialism must take care of what it has created. If it cannot, or if it will not, Industrialism must go. Every institution in the last analysis must be judged by its ability to fit normal human flesh and blood. There was a time when a silk weaver could toil 17 hours a day and then not have bread enough to eat; when a haughty French aristocrat could tell the starving peasantry that if they were hungry they might eat grass. But it was also at this very time that France—

"In wrath her giant limbs upreared
And with that oath, which smote air, earth and sea.
Stamped her strong foot, and said she would be free."

I myself have seen an institution far more firmly rooted than ever Industrialism was, or is. I have seen it almost in a night by its overweening insolence laid lower than the lowest.

When Irish landlords looked upon their tenants as mere chattels from which money could be ground; when an Irish landlord, because one of his sheep had fallen into a ditch, and he thought it had been stolen by a tenant, set fire to 20 cottages and drove men, women, and children through the wild mountains of Donegal—then it was that the shots fired from behind hedges were the opening cannonade in the great battle which was to shatter landlordism to the seven seas.

With Industrialism recognising its responsibilities, we shall no longer behold the young mothers of our nations, wan, haggard, and an hungered, literally giving their very life's blood in order that the nation may live. No longer shall the old man beg to be sent to our jails for shelter in the Winter of their life. We shall recognise that they are our conscripts in the great battle of labor and that fighting our battles they have been so cruelly marred.

Chesterton sometime ago wrote a book entitled "What's Wrong With the World?" He sums the matter up in a parable. A few years ago a London doctor suggested that the hair of all the little girls of the poor should be cut short. Why should it be cut short? Because in a percentage of them there was found to be lice. Why was the lice found? Because the mothers did not attend to the childrens' hair. Why did the mothers not attend to the childrens' hair? Because they had to work in order to meet the high demands of living. Why was living so high? Because of usurious landlords. Chesterton at this time looked out of the window and saw a little girl with red hair crossing the street. "With the red hair of that one she urchin of the gutter, I set fire to all civilisation." Empires may rot, the pillars of society may be shaken, the roofs of the ages may come toppling down, but that little girl shall have her hair. Her mother may bid her bind her golden locks, for that is her natural pride, but all the kings of the planets shall not bid her cut it. Industrialism was made for man, not man for Industrialism.

If law is a record of the gradual development of the moral conscience of the nation no true advancement is possible for the State or the community without higher moral ideals. Ferret-like we may cause vice to bolt from one lair. It only scurries to another. There is no true advancement. These ideals must be implanted in the homes, amongst the youth of the nation. When Hamilcar, the old Carthagenian General, felt his end approaching and saw Rome still victorious, he took his young son Hannibal to the shores of the Mediterranean. Pointing over its blue waters he said: "My son, yonder lies Rome! I want you to swear by the gods of your fathers that whether you live many days or few; whether you die at home or abroad, you will live and die the enemy of Rome." Hannibal, as history shows, was faithful to that ideal and almost brought the proud mistress of the world to her very knees. If throughout this far-flung Dominion lofty ideals and high principles prevail, we shall have fairer cities in which to dwell, we shall have a greater and nobler Canada to which to belong.

Health Education of Children

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Among the Resolutions adopted at the Cannes Conference in 1919 occurs the following:

> "That the training of school children in all grades by thoroughly qualified teachers in the subjects of personal hygiene and the inculcation of proper health habits during school life are perhaps the most important undeveloped measures for permanently improving the health and contributing to the welfare of the people."

Why is it true that more is to be expected by teaching children themselves than by the enforcement of health rules in a community? Have the past two years' experience justified the expectation expressed in the resolution above referred to? These are questions which naturally arise in the minds of those who are studying the entire health programme as related to the child.

No matter what particular phase of the health field we are considering—even things as widely different as infant mortality, venereal disease, hook worm and tuberculosis—in the last analysis we come to the fundamental fact that progress depends upon the personal hygiene of the individual, his food, his health habits, etc.

The next important thing to be recognized is that personal health habits can be permanently improved only through the slow process of education. It is true that in times of emergency, when cholera, typhus, small-pox or other grave epidemic threatens, the public can be roused through the press and other agencies to the importance of strict personal cleanliness—the boiling of milk or of drinking water and other hygienic measures which may be emphasized—but once the immediate danger is past, laxity returns and old habits soon reassert themselves. While there may be a residuum left as a result of education, it is very small, and when the next emergency arises the whole process must be repeated.

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Must this always be the experience? Is there no better way to secure the desired result? The reason for this failure is the fundamental difficulty of teaching adults the essential principles of hygiene, or what is even more important, to get them to change permanently their habits of personal hygiene, in regard to food and drink, cleanliness, fresh air, etc. Some of these are racial and have the sanctity of long usage but need to be altered to meet the changed conditions of modern life. Many of these rest upon no other basis than prejudice and superstition, and there are no reasons for their continuance.

HEALTH INSTRUCTIONS MUST BE GIVEN TO CHILDREN.

If a higher standard of general health is ever to be secured this must depend upon the health education of children. Children are teachable in matters of health as much as in anything else. As a matter of fact, they are all taught now; but are good habits taught, and are they practised? The home is the natural and proper place where the simple rules of healthy living should be taught and where the child should learn to practise them.

A careful study of the diet and health habits of the average school child in the United States, both in urban and rural districts, revealed a state of affairs both startling and lamentable. Among the most important are the following:

The astonishing degree to which coffee is drunk by children of the ages of eight to twelve. In many instances the only breakfast of the school child is bread and coffee.

The extensive consumption of sweets and trash obtained in cities from push-carts or small confectioner's stores—these things not at meal time or as a part of the meal, but between meals and often entirely replacing all other food between breakfast and the hour of dismissal from school. One consequence of these habits is the loss of all appetite for plain, simple articles of food.

Lack of adequate rest and sleep, not only during the school but during the entire period of growth. Children of ten or twelve, and often those even younger, are playing in the streets until ten o'clock or later or are sent or taken by parents to the moving picture shows. A child who must be in school at 8.30 o'clock must often be dragged from his bed in the morning, snatch a hasty breakfast and rush to school without time or thought of the daily evacuation of the bowels.

The effect of these habits not only upon the health but upon the school work of the child is just what might be expected.

Extensive school surveys made in many parts of the United States have shown that fully 20 per cent. of the pupils are so far below average weight for height as to be classed as cases of malnutrition, while a much larger proportion have shown the existence of remediable physical defects which hamper growth. This condition is not confined to the city or to the country districts; it does not belong to the poor.

One cannot study the results of these surveys without the conviction that the home as a place of health teaching has not met the situation. In fact, it has failed lamentably in a very large proportion of cases. Many reasons might be given for this, but two seem especially important: first, the ignorance of parents themselves in regard to these matters which underlie healthy growth; secondly, the complete breakdown of the discipline or authority of the home. When the child enters school he no longer accepts or recognizes the authority of the home.

Nor has the school in the past done much better than the home. The success of health education must be measured by its results. Not what children know but what they do is to be our guide to success or failure. Schools have taught hygiene and physiology for years; but with what success as measured by results? The health habits of the children have not been affected by such teaching; practically it has been a failure. This leads one to ask whether after all the school is the place for health education. Also why it has failed and whether and how it can succeed.

The advantages which the school offers are many: The child must attend school for six or eight years. He goes to school expecting to be taught. What his teacher tells him carries a certain authority, much more authority than what his parents tell him in the home. He is at a teachable, receptive age, not only as to ideas imparted but almost as much as to habits formed. In schools public opinion of the pupils is a powerful influence. This makes it possible to get groups of children to do what it is often difficult to get children individually to do. With groups it is possible to take advantage of the love of emulation or competition which appeals to all children. This will be considered more fully later.

The chief causes of failure of health education in the school are two: In the first place, health teaching has been abstract, largely theoretical, not linked up with practical life; and secondly, it has not been made interesting.

Before going on to discuss methods of successful health teaching it is well to consider what sort of health education can be given to children. This teaching may relate to matters which concern public health which has largely to do with measures which are employed to prevent disease, such as a pure milk and water supply, clean streets, good sewerage, vaccination, quarantine of infectious diseases, the destruction of flies, mosquitoes, rats and other insects or vermin which spread disease. All of these can be made very interesting to children, if properly presented, and such instruction will do much to prepare children for their duties as future citizens. Subjects of this kind will naturally be taught to older children and in upper grammar grades or in high school.

Much more important even than these are the things which relate to personal health. Instruction in them should be begun in the primary grades and should be continued, the form of course varying throughout school life. The purpose here is not to teach children to know things, but to teach them to form the habit of doing things—that is, those which are essential to health; the emphasis should be laid upon the promotion of health, not the prevention of disease.

The teaching should be positive, not negative, always emphasizing what the child is to do, never the dont's.

The purpose being the formation of proper health habits, the problem then becomes one of, first, selecting the most important, and secondly, devising means of securing their constant repetition until they become automatic. The habits stressed by the Child Health Organization are known as "The Rules of the Game"; they are as follows:

A full bath oftener than once a week.
Brushing the teeth at least once every day.
Sleeping long hours with windows open.
Drinking as much milk as possible, but no coffee or tea.
Eating some vegetables or fruit every day.
Drinking at least four glasses of water a day.
Playing part of every day out of doors.
A bowel movement every morning.

These are very simple but very fundamental health rules; if observed by all children they would certainly bring about a very marked improvement in their physical condition.

How to get these things done by the children, not for a few days or weeks but regularly and continuously during school life, is the problem. The first thing is to get children to look upon health as a game, which like other games has its rules like those mentioned. How does the child know he is winning or losing the game? His weight tells the story. If he is gaining regularly he is winning; if his weight is stationary or if he is losing weight, he is losing the game. Competition in health stimulates the child to effort as does competition in sports or study.

For this end we have in view only such knowledge of the functions and needs of the body as is required to make the child understand what is necessary for its protection and care, or enough to form the basis of good health habits.

The child can easily learn the essential needs of his body, such as proper food, cleanliness, fresh air, exercise, rest, regular bowel movements, etc.; also the things that do harm, as impure food, decayed teeth, excess in eating or drinking, lack of proper sleep, the use of tea or coffee, alcohol or drugs. It is self-evident that before children can be influenced they must be interested. The aims of the Child Health Organization have been to develop methods of interesting children and then to get instruction in health into the school as a part of daily routine.

METHODS OF AROUSING INTEREST.

The interest of many children, especially those under ten years of age, can sometimes be created by the credits given for regular performance of the so-called "Health Chores" of the Modern Health Crusade and various "health leagues." When these have been repeated a sufficient number of times, the hope is that they may become fixed habits. The objection to the work of many of these organizations is their complexity and the amount of time required both by pupils and teachers. It too often happens that the novelty soon wears off. Something more than the reward of the gold star is needed to secure the effort necessary for permanent results.

The Child Health Organization has developed and trained certain dramatic characters as health teachers for young children. They fascinate and amuse in such a striking way that the children are influenced more by them than by any means yet devised. They are a wonderful help in stimulating a primary interest, but are to be followed up by other measures. The best known of these dramatic characters is Cho-Cho, the health clown (christened with the initials of the Child Health Organization); he is a professional clown who entertains large groups of children while he instructs them in matters of food and hygiene.

The "Health Fairy" is a trained nurse of magnetic personality who interests the children by fairy stories which teach health lessons. The "Jolly Jester" is a ventriloquist who teaches the same lessons by somewhat different methods. The fourth character is "Happy," a prestidigitator. These characters appear in schools or before large groups of children, and it is surprising to see how much interest is awakened by their instruction and how ambitious the children are in carrying out the things suggested.

Valuable use has been made of the dramatic instincts of children in the production of little health plays, and they are encouraged to write such plays themselves. In brief, the effort is made to make health instruction play in some form, with the belief that in this way greater interest can be roused and a deeper impression made. In such ways the essential facts regarding necessary foods and food values and important health rules can be impressed upon the child, who is quite unconscious of the fact that he is being taught physiology and hygiene.

Very attractive literature has been produced with pictures and health rhymes for little children which has had a wide-influence.

GROUP COMPETITION EMPLOYED.

Probably the simplest and most widely useful of all the means of interesting children of all ages and one which involves the least time and labour in its application, and the most potent influence in maintaining an interest in the observance of the rules of health, is group competition based upon the record of height and weight. Most of the instruction to the mother regarding the care and feeding of her baby has centred about the child's progress in weight. The best single guide to progress in health during the entire period of growth is a regular gain in weight. The things which affect nutrition are therefore the most important ones which must be emphasized in health education. To the physician the essential habits of daily life which are necessary to healthy growth are known as the laws of health; to children they are taught and practised as the "rules of the game"—a competitive game, too.

Weight contests have been widely used. Those who are up to normal weight for height receive a yellow tag, and those who are below, a blue tag. The actual weight for the child's height is placed on the tag and also what the weight should be for height and age. These things make a child think and ask questions. Where weights are taken in school they are entered each month upon a special classroom record placed in the school room. Weight is something concrete which the child's mind can grasp. Such weight records and the health teaching which can be tied up with them should be continued throughout school life.

Let us see how this works out in practice. There must of course be scales in the school so that every child is weighed and measured at the beginning of the school year and weighed monthly thereafter. The weighing time is a solemn occasion, a sort of monthly day of judgment. Each child is anxious to maintain his standing and to make progress. When the results of the weighing are known, one teacher comments to the class somewhat as follows:

"Now will all the children who are up to their normal weight for height stand up. Children, I could tell it by your looks—your bright eyes, your rosy cheeks. I could tell it by the way you play at recess, by the way you carry yourselves, by the kind of work that you did in school last month," etc.

"Now I want all who gained in weight last month to rise."

"That is fine!"

"Now, boys, won't you tell us how you did it?"

Many hands go up, each anxious to tell his experience. No comment is made upon those who are below weight, nor on those who have lost weight in the month. There is constant praise and encouragement for those who succeed, but no word of condemnation or reproof for those who fail. In such a school health becomes "the thing," and a public opinion has been created which nothing can withstand. The child is competing not so much with his mates as with his own record. One child came to his teacher and said confidentially: "Something dreadful has happened. Do you know that I lost a pound and a half last month?"

"I'm so sorry," said the teacher.

"But," he continued, "I think I know just what did it. I was going to bed at half past nine when I know I ought to be in bed at eight. I'm not going to be caught that way again."

ESSENTIAL RULES OF HEALTH ARE SIMPLE.

When a child is found much below weight, when he is not gaining or when he is losing weight, he is at once anxious to know why. Which rule is he breaking, the one relating to food, to hours of sleep, tea and coffee, or what? Now is the occasion to stress the health rules. He is eager to learn; he wants to be in the healthy group. He is ready to submit to a medical examination, willing even to have tonsils and adenoids removed or teeth extracted, if these seem to be the cause. As these records of health progress go home to the mother on the monthly report card, her interest is soon awakened and with little difficulty her co-operation can be secured; in fact, the child's zeal often makes this inevitable.

When a child has learned in school that to get up to his normal weight or to gain weight he must go to bed at eight o'clock and not play in the street till ten or eleven; that he must drink milk, not tea and coffee; eat regular meals and not fill his stomach with trash between meals; must eat a variety of food cereals, green vegetables, fruit, etc.—does anyone for one moment believe that such habits formed in childhood during school life will not make a lasting impression upon the life of the individual? Too much emphasis cannot be placed upon the fact that the essentials of personal health are such simple things as these, and that even the untrained teacher, once she is interested, can carry them into effect.

To carry out such a scheme of health education as has been outlined above very little equipment is needed: Practically scales in the schools and a measuring rod or a tape tacked against the wall are the only apparatus required. The main thing is a teacher who is interested, who appreciates the value of health and who in her own person exemplifies the value of obedience to these rules. Interest of the mothers is awakened by instruction given to their children, and encouraged by visits made to the homes by teacher or volunteer social worker, and by instruction given to the mothers in groups at the classes.

For children who are in particularly poor condition special health classes, known as nutrition classes, are formed. These children at first should be subjected to a complete medical examination to discover whether their condition depends upon bad habits, improper or insufficient food, some physical defect or to some existing disease. In the great majority of cases it is the diet and the health habits which are at fault and the purpose of the weekly visit is to correct these. These classes have been in operation in New York and in many cities of the country for the past two years and are being organized in increasing numbers. They are likely to prove the most important health measure of the decade, doing for older children what the milk station or "consultation" has done for the infants.

The health education of children is something which must be carried on through school life. Children should be taught to look upon health as a thing of joy, a source of happiness, something which is essential to success in sport as well as in work.

While the problem of the best means of health education of children is by no means solved, it is believed that a beginning has been made along lines which in the future are likely to prove of great assistance in this admittedly difficult field.

Health in Industry and Its Relation to The Community

BY DR. J. G. CUNNINGHAM.

Read before the Section of State Medicine, Academy of Medicine, Toronto, Nov. 29th, 1921.

PUBLIC HEALTH in its first stages was preventive only. It came into being to do away with obvious nuisances or public dangers—to enforce the removal of garbage, for example, and to isolate the infectious individual. Like any great movement, however, that has what may be termed the creative germ and is based on true principles, it could not long be restricted to mere prevention—its negative side—but had to develop on its creative side; that is to say, to offer positive information as to safe practices at the same time as it issued the prohibitive utterance regarding the unsafe ones. To take a current instance, no wise public health agency suggests prohibition of the use of white lead without giving a great deal of time and care to the question of a satisfactory substitute.

Side by side with this development of public health from prevention to creation has come another parallel development. Starting theoretically from the consideration of the public whose rights have to be safe-guarded, we have in practice passed to consideration of the individual as an entity, whose capacity, needs, and problems have to be studied for the good of the whole. Thus, workers in public health have entered the home, which is now looked to, to tell the story of contributory causes of disease. The experience of industrial managers has been along the same lines in that they have likewise come to consider the individual and his home in relation to health.

The war brought to light the great amount of unknown disability existing among ordinary so-called healthy people and thus brought the question of health forcibly to the public mind. People are accordingly at the present time more in a mood to welcome any programme aiming at health promotion, and the opportunity presented by such a mood should not be missed. Not only should health work be actively conducted, but, since public sympathy has been obtained, a special effort should be made to avoid alienating it by duplication of effort. Co-ordination of activity is wisely rated very high by those looking on.

It is with the man at his job, of course, that industrial hygiene is primarily concerned. The problems arise from the great variety of individuals, the variety of industrial processes, and the infinite number of inter-reactions possible between them.

The range of the subject as it touches other public health activities may be briefly indicated. It involves consideration of the effect on infant mortality of employment of women. Studies of the subject recently made by the Children's Bureau of the United States Department of Labour show that the infant mortality among infants born of mothers gainfully employed is consistently higher than among infants born of mothers not gainfully employed, but in other respects living under closely similar circumstances. In one instance this infant mortality rate was as high as 252. Whether the greater mortality is due to a change to artificial feeding as the result of the separation of the mother from her infant at the time of her return to work, or whether it is due to conditions produced by the work itself is not stated. Investigation of the infant mortality among mothers gainfully employed away from home during pregnancy and not employed following the birth of the child might bring some interesting information to light. (France.)

Industrial hygiene is also intimately concerned with conditions of what Collis terms "industrial birth"; that is to say, with the metamorphosis of the school child into the industrial worker. Unfortunately in the present economic condition this period of transition coincides with that other period of transition, namely, adolescence. It is unnecessary here to dwell on the increased susceptibility to harmful influences at this period, but it is probably safe to say that the year following "industrial birth" is only second in importance in the individual's life, from the point of view of health, to the year following his physical birth. Studies indicate that about 35 per cent. of children entering employment change their job within the first three months. A study of employment certificate records in Connecticut in 1920 show that 23 per cent. of the children who had worked for from 21 to 24 months before the age of 16 had held four, or more positions. A large number of factors enter to cause this. How far an instinctive attempt at adjustment on the part of the child is responsible or to what extent conditions of work in relation to the individual's health play a part is not known. The ideal is, of course, that the child should be directed to the industry and the job to which he is best suited mentally, temperamentally, and physically, or should, at any rate, not be turned into one calculated to increase any defect already existing. For assistance here industry must look to the school medical history of each child and particulars as to any defects and disabilities. Such record is an almost indispensable adjunct to the final school physical examination, which sums up the child's physical capacity and thus assists in his correct adjustment in industry. Probably parents' consent to a full physical examination might be more readily obtained if they could be made to realize more fully its practical value in putting the child into good physical condition in order that he may be ready to assume any work for which his ability, temperatment, and education make him otherwise fit.

This brings us to the central task of industrial hygiene, which is a maintenance of healthy and efficient workers. In this regard the duty of the state is to provide itself with information as to the best practices and methods by which such maintenance can be secured and to make this information readily available for industry, with which rests the responsibility for provision of actual health service for its workers.

The means taken by industry for safe-guarding the health of its workers usually, as you all know, takes the form of industrial medical service, involving physicians, surgeons, dentists, dispensary and visiting nurses, and equipment, ranging from simple arrangements for first aid to provision of elaborate hospitals for treatment. At present in this country the large proportion of wage-earners work in plants employing small numbers. Employers of less than 300 workers commonly feel that the expenditure on the full time service of a physician, or even of a nurse, is not justified. It is possible that a number of these small plants in one locality might combine to provide medical service for their employees on a per capita basis, thus converting the health supervision as an ideal—and these small plants have the ideal very often as much as the large ones have—into a financial possibility. At least two or three attempts have been made to apply such an idea.

Dr. Selby in Toledo established such an office in an industrial section there, where he received cases of accident and sickness from the small plants co-operating, conducted physical examinations on employment, and from which he supervised the conditions of health in the plants and at home.

Dr. Ellis, of Chicago, initiated a scheme where a practitioner visited a plant having 400 employees for one hour daily, supervised conditions of work and the workers' health, and advised such employees to see their family physicians, or, if they desired, referred special cases to physicians or surgeons with special facilities available for diagnosis and treatment.

The Provincial Board of Health of Ontario have made the attempt to determine whether public health nurses in general community health work could include in their activities such small plants having no service other than lay first aid, to the benefit of all concerned.

With the co-operation of the physicians, employers, and employees, two public health nurses were detailed to a small town of about 5,000 inhabitants, largely composed of employees at four plants. The visits which the health nurse makes were emphasized in respect to both the industries and the community at large.

Contacts established by the nurse in the industries in her area, through lists of absentees furnished by the time office, through requests for advice in health, and through first aid rendered, were co-ordinated with those contacts established in her child welfare activities, through birth registration and well-baby clinics.

Some duplication in visits was avoided. Industry provided contacts valuable for the opportunity to extend health teaching and demonstrate the value of the prevention of disease, which six months' work indicates might never have been established otherwise.

Reports to employers of conditions dealt with by the nurses and the results achieved, have been favourably commented upon.

As a result the town and the four industries have united by written agreement to appoint a public health nurse, who will work in accordance with the plan here outlined.

It is felt that this work will give employers concrete evidence on which to base recommendations for the establishment of industrial medical service in their plants, which will include in its activities many other aspects of health promotion in industry. Such a method of initiating industrial medical service is far from ideal but it is considered to be a practical one. The disadvantages are obvious:

(1) First aid and other nursing activities should be conducted under the general supervision of the physician. At present the majority of plants arrange that the practitioner will be on call for cases of accident or emergency sickness only.

(2) The possibilities of promoting health in industry are by no means confined to the advantages from visiting nursing.

(3) The view point of the nurse in dealing with wage-earners may suffer owing to her limited contact with industry.

Sex Education

EXTRACTS FROM TEACHERS' COLLEGE BULLETIN, COLUMBIA UNIVERSITY, NEW YORK.

"SEX EDUCATION" is defined by Dr. Maurice A. Bigelow (Professor of Biology and Director of the School of Practical Arts, Columbia University) as follows: "All scientific, ethical, social and religious instruction and influence which directly and indirectly may help young people prepare to solve for themselves the problems of sex that inevitably come in some form into the life of every normal human individual."

Sex-education as thus defined touches great problems of life in so many ways that it must be far more than merely a school subject limited to a curriculum extended over a few years. On the contrary, the "larger sex-education" or "social-hygiene education" includes all organized effort, both in and outside of schools, toward instructing and influencing people regarding the problems of life which are directly and indirectly connected with sex.

We must distinguish between sex-education and sex-instruction. Education means development of will, feeling, thought, the formation of habits and of character; instruction is only one of the means of education, having for its object knowledge. Young people need sex-education, not merely sex-instruction.

Sex-education should deal with health and morals. Biological (including physiological) and pathological facts are to be taught only as reasons for hygienic and moral living. This principle rules out much that is given in books. "Sexology" is not needed. The approach with adolescents should be the ethical and the hygienic.

No sex courses—It is not desirable that any parts or courses of the curricula for schools and regular colleges should be known to the public as "sex" studies, but we need such terms as "social hygiene" and "sex-education" to indicate to teachers and parents that definite parts of the education of young people are being directed towards a healthy, natural, and wholesome relation to life as it is affected by sex.

Sex-instruction should not be concentrated in a short period of youth because it is impossible to exert the most desirable influence upon health, attitude, and moral character except by instruction beginning in early childhood and graded for each period of life up to maturity.

Character Education.—Sex-education is but a phase of character education as a whole and can not be accomplished at any one time, but must be a progressive process of care, guidance, instruction, and example. This fact, together with the intimate relationships of the members of the family, places upon the home the chief responsibility for sex-education of children during the earlier years. However, some persons do not understand the sex nature of their children and do not fully appreciate the need of sex guidance, or feel themselves prepared to give correct instruction. Therefore, parents should be helped by printed matter and lectures to prepare themselves for guiding and instructing their children in respect to sex.

Protecting Children.—It is nonsense for parents to feel sure that their children are safely protected against any vulgar first lessons concerning sex; for no one can know that children are safely guarded from others who may corrupt their innocent minds. Normal children are almost certain to get sexual information not later than the early adolescent years, and usually from unreliable and vulgar sources (see reports by Exner and others). Even morals may become corrupted and health irreparably injured several years before puberty. The only sure pathway to health, attitude, and morals, is in beginning with young children and instructing them as gradually as the problems of sex come forward in the individual life.

Beginning Sex-Education.—There is a widespread but erroneous impression that sex-instruction should begin with the approach of adolescence and soon be completed. On the contrary, sex-education should extend in the home and school from early childhood to maturity. The first instruction and guidance which may begin to lay the foundation for the individual's sex-education should be given in early childhood by parents, or by other adults who happen to be on the most intimate terms with the child.

Effects of Ignorance of Adults.—The policy of maintaining mystery and secrecy concerning things sexual has failed with adults even more sadly than with children. Health and character and human affection and the family have suffered incalculable injury because people are ignorant of fundamental laws of sex.

Policy of Silence.—The time-honored policy has been one of silence and mystery concerning all things sexual. Everything in that line has long been considered impure and degraded, and therefore, the less said and the less known, the better, especially for young people. This policy of silence has been a gigantic failure, because it has not preserved purity and innocence, and because it has allowed grave evils, both hygienic and moral, to develop under the cloak of secrecy.

Intelligent Control Necessary.—Human sexual control must be on the basis of intelligent choice, because there is no basis for instincitve control, as in the higher animals. This means the greatest task of human life, for there must be voluntary control of instinctive impulses or sexual desires which are intensified by numerous environmental stimuli or temptations that set up exclusively human problems.

Since human beings are by nature left to control their most powerful appetite solely by intelligent choice, it is evident that a policy based on silence, ignorance, and mystery must fail.. The only safe and sure road to the needed control of sexual actions is to be found in knowledge (a) of the reasons why control is best for the individual and for the race and (b) of the ways and means of control of sexual conduct.

Controls of Conduct.—The problem of sex-education resolves itself chiefly into the problem of developing controls of conduct of which there are many: public opinion; the feeling of shame or sense of modesty; fear of legal, social or medical consequence; fear of inflicting injury upon others; conscience or instinctive feeling of obligation, which is not merely the knowledge of right and wrong; sympathy which inhibits conduct that would affect the lives of others; high respect for womanhood and manhood; habits of chastity; knowledge of the general relations of sex and life; athletic and physical exercises as inhibitory factors; literature which portrays romantic love that spiritualizes the sex instinct; and enthusiasm for sport, art, science and other physical and mental activities.

To be continued.

Annual Meeting—Ontario Red Cross

The annual meeting of the Ontario Division of the Canadian Red Cross Society was held in Toronto on January 31st, 1922.

The President, Mrs. H. P. Plumptre, gave a comprehensive review of the work of the Ontario Division, mentioning with regret the death during the year of the vice-president, Lady Beck, of London, and of the honorary president, the late Lieutenant-Governor. She then referred to the problems confronting the Society in providing nurses and doctors in New Ontario, to the need of popularizing health knowledge and of instituting public health and extension courses in rural communities. She reported that during the year 81 life-members enrolled and 19,362 annual members; public health nurses engaged to make a survey of the school children; infant welfare carefully attended to, including the expenditure of $477 for a nurse for a home where triplets had arrived, and a special study made for forming emergency organizations, by Miss V. M. Macdonald, appointed for this work. The sum of $70,000 was contributed for relief in Europe. The St. Catharines branch made a large donation for the work among the blind; Ottawa branch gave a large contribution for May Court Club's tubercular work, and Oakville made up 250 bags for soldiers in the Brant Hospital. The Sarnia branch had a varied programme, including community health service, social service and playgrounds. The work of the Junior Red Cross had progressed under Mr. McCready, who reported that 108 schools in Ontario had formed organizations.

Dr. John Waugh, representing the Ontario Department of Education, spoke of the excellent co-operation between the Department and the Junior Division of the Ontario Red Cross.

Dr. Farley of the Ontario Medical Association thanked the Ontario Division for assistance given to the Ontario Medical Association in financing clinics, demonstrations and lectures to physicians at different places in the Province. These were of great assistance in promoting public health and medical education in rural districts.

Miss Kathleen Russell, Director of Public Health Nursing in the University of Toronto, introduced the following eleven nurses who were presented with Red Cross Scholarships by His Honour the Lieutenant-Governor:

Miss M. V. Adams, Hanover.
Miss Florence Conlin, Toronto.
Miss Marion Stevens, Napanee.
Miss Bessie Jones, Elora.
Miss Helen Latimer, Carleton Place.
Miss Margaret Kettlewell, Norwich.
Miss Mildred Sellery, Brussels.
Miss Broadfoot, Toronto.
Miss Teresa Huntley, Toronto.
Miss Mabel Sharpe, Toronto.
Miss Daisy Dean, Sandhill.

The following Officers and Executives were elected for the year 1922:—

Hon. President, the Lieutenant-Governor of Ontario; President, Mrs. H. P. Plumptre; Vice-Presidents, Colonel Nasmith, Mr. F. A. Mulholland and Miss Jean I. Gunn; Honorary Secretary, Professor G. M. Wrong; Honorary Treasurer, Colonel Noel Marshall; Honorary Solicitor, Colonel Thomas Gibson; Executive Committee, Mrs. C. R. Crowe, Guelph; Mrs. John McGibbon, Sarnia; Mrs. H. E. Harcourt Vernon, Toronto; Mrs. George Watt, Brantford; Mr. A. H. Campbell, Mr. A. F. Rutter, Professor J. A. Dale, Toronto; Mrs. J. Cowan, Oshawa; Dr. R. E. Wodehouse, Ottawa; Mrs. Ronald Harris, London.

Conference on the Future of Public Health in the United States and the Education of Sanitarians

ON March 14th and 15th there was held under the auspices of the United States Public Health Service in Washington, a conference of deans of schools of public health and medical schools, presidents of universities with which these schools are connected, a selected number of professors of public health subjects and men actively engaged in public health work, on "The Future of Public Health in the United States and the Education of Sanitarians."

After considering the present status of the public health movement and present facilities for the education of health officers and other sanitarians, the conference considered various newer aspects of public health and their importance in the training of sanitarians; the various kinds of sanitarians which will be needed for the future; the recruiting and training of more and better sanitarians; and the various problems connected with the training of sanitarians for the future and the further education of those who are now employed in public health work.

Among those taking part in the conference were Presidents James R. Angell, Livingston Farrand, Frank J. Goodnow, Ray Lyman Wilbur; Deans Hugh Cabot, William Darrach, David L. Edsall; Professors Allen W. Freeman, E. O. Jordan, Roger Perkins, Mazyck P. Ravenel, Milton J. Rosenau, George C. Whipple, Jesse F. Williams, C. E. A. Winslow; Doctors Lewellys F. Barker, Walter H. Brown, John A. Ferrell, Lee K. Frankel, Otto P. Geier, Frederick R. Green, Vernon Kellogg, John H. Stokes, Victor C. Vaughan, George E. Vincent, William A. White, Hubert Work; also Doctors S. J. Crumbine, Hugh S. Cumming, Eugene R. Kelley, L. L. Lumsden, A. T. McCormack, A. M. Stimson and Allan J. McLaughlin of the United States Public Health Service and the various State Boards of Health.

"The rapid development of the public health movement in the United States, the shortage of trained public health officers and the present inadequate facilities for their education," said the Public Health Service in its letter of announcement, "has brought about a situation which, in the opinion of the United States Public Health Service, merits a thorough consideration not only by leaders in the public health movement, but by university presidents and others who are now participating in the education of youth."

The announcement continued: "Numerous surveys have strikingly called attention to the need for more and better trained health officers. On the other hand, there has never been so much interest among people generally in public health as there is at the present time. Could there be made available a larger number of trained public health officers, it would be possible within a comparatively short period of years to immeasurably increase the health, efficiency and happiness of the American people.

"From these considerations it appears that the problem of the education of health officers is a matter perhaps more important in its many implications than any other now before physicians and educators."

Because of the nature of the conference it was open to the public. The addresses, however, will be printed and will later be available.

Social Background

Unemployment Relief

F. N. Stapleford.

General Secretary Neighborhood Workers' Association, Toronto.

SOCIETY which gives so much to the individual also makes certain demands. His very life is at the disposal of the state in time of war. The individual is also forbidden, no matter what the stress of circumstances, to help himself to the property of others. It is illegal to beg. There seems to be then an implied obligation to at least prevent any members of that society from starving. Apart from consideration of humanity, if that principle were not recognized, the bonds of society would dissolve. This is a principle however which it would be *extremely unwise to emphasize.* To teach people to depend upon society in the last thing that is advisable. *Society's* help should not be the first resource but the last resource.

The situation is an elastic one. The individual or family rarely stand alone, but are the centre of a web of social relationships. It is these which in a large measure must break the shock. This must be so. The loss of wage in industry could never be made up by relief. In the week ending March 11th, 1922, the Government Employment Bureau of Toronto had registered 20,135 men and women out of employment. Many others have doubtless not registered. If the number is taken as 20,000 and the average wage $20, the loss in wage would be $400,000 in a single week. Multiply that by a period of months and you have an impossible situation. That sort of loss cannot be met by relief either public or private. That loss must be distributed in all sorts of ways—by lowered expenditure, by credit, by help from friends and neighbors, by various rearrangements and economies. There is a residuum of the problem however which under present conditions must be met by relief.

Unemployment relief one of the most difficult tasks set for the social work. There is something incogruous and unnatural in supplying the necessities of life to the families of able bodied men.

When a man is ill or disabled the psychological conditions in regard to the receiving of relief are quite different. The man is unable to work and society is providing for his family. In the other case it is society itself through raw and ill adapted arrangements, which is withholding the opportunity to work to the man able and willing to do so. There is an attitude of resentment in the one case which does not exist in the other. Relief is accepted more as a matter of right, and makes him form a mental habit, in which he is sometimes unwilling to take advantage of even the limited opportunities of self help which the situation affords.

In the relief there should be good team work between public and private agencies. A large part of the cost of the relief must necessarily be borne by the public departments, for such necessities as food and fuel. Rent and clothing problems should very decidedly be handled by private agencies. The largest contribution which the private organization can make is in individual attention and service to the family. Public departments usually find it more easy to secure money for relief than for staff. Relief without that service which would develop the personal resources of the family is a dangerous thing. The private organization can be of great assistance in rendering this service.

It goes without saying that all should use the Social Service Exchange. A period of unemployment is, in any case, a time of great social loss. A high type of family life is one of the things of greatest value—and in times of unemployment family life goes down, becomes coarse and cruder, while the finer values often vanish. In many cases the family which may have had differences and difficulties before, now comes to final shipwreck in a period of depression.

Social workers must think not in terms of the present crisis only but in terms of permanent effect. We are really fighting for these finer values in life, trying to help in the preservation of initiative, self control, mutual consideration and love as elements in family life. Ten years from now social organizations will be dealing with families and individuals who have become a permanent problem because of the present depression. They become casualties of the industrial order. It is the business of sound workers to see that the number of these cases is as few as possible.

In this we are not talking of the unemployed as a distinct class. Any group of people who lost their occupation and were unable to discharge the obligations resting upon them would degenerate in character and effectiveness after six months of it. They would have gone down hill more or less.

There are certain ideas which should be emphasized in regard to handling unemployment relief. 1. There should be a proper classification of the unemployed. They are not all alike and they obviously should not be treated alike. They differ in moral character, in physique, in education, in fact in every possible way. Each should be studied as an individual separate problem. If we in a blundering effort to achieve democracy try to treat all alike we injure rather than benefit. Some men are unemployed because there is no work, others because they are really unemployable for mental or moral reasons. In Miss Richmond's latest book, she quotes Plato to the effect that to treat unequal things unequally is the essence of equality. Because problems come to us in large numbers we should not throw overboard our casework standards and adopt any mechanical method of dealing with the problem which reduces all to one dead level.

A recent case in the N.W.A. office is that of a man who is a mental case but who is not an obvious type. It would probably take an employer a week or ten days to really discover his type, and then he would inevitably be discharged. If work was plentiful enough so that he could get a new position every ten days he would not be unemployed. How would you classify a man of that kind?

2. *There should be no big central relief fund with a central* office to which people come to apply. There should be centralization of planning among the various organizations which carry responsibility but decentralization of relief. An office interview is of very little value unless followed up not only by a home investigation but also by getting into touch with such other connections of the family as will give the information on which a real judgment of the family situation may be based.

3. *As far as possible there should be no publicity.* There is an interpretative publicity which is helpful, but to see in the paper day after day that those who need their rents paid should go to such and such an office and those in need of fuel or food to go somewhere else, creates tremendous problems. A fictitious and unreal situation can be quickly produced. There will be a long line up of applicants, for naturally there are a large number of people behind with their rent and it is perfectly natural for them to accept an invitation such as that. Someone might object that such publicity is really necessary or else there will be suffering due to people not knowing where to go. There is, of course, the possibility of

this occurring in individual instances, but the danger is not acute. Toronto is covered by a pretty effective network of social agencies, public health workers, etc., and cases of real need are usually found or reported in by a sympathetic neighbour or friend.

4. *There should be no bread lines, soup kitchens, etc.* Such measures are positively demoralizing rather than helpful. In front of one place in the city where help of this kind is given hung the sign a few days ago, "All you want to eat and drink for nothing, at one o'clock." A little later the sign read, "Free beef sandwiches and creamy coffee at one o'clock to-day." I think that it is very much open to question whether the religious service which follows the free sandwiches, undoes the harm occasioned by such unintelligent and indiscriminate methods. Mass methods necessarily fail.

5. *Street begging should be repressed.* The public should be aware of the fact that in times of disturbance there appear numbers of people to whom the situation presents an opportunity. Everyone at present knows of the unemployment condition, but many do not know of the provision which has been made to meet the need. When they are stopped on the street they usually take the easy way out and give a small sum. The public should know that by so doing they are definitely injuring that individual, teaching him that to tell heart-rending tales which usually belong to the realm of pure fiction, is more lucrative than to work. One such man admitted the other day that a friend of his in the business in Toronto was making about $37.50 per week which he was spending with great satisfaction. Sometimes people who know better cannot resist an appeal, for it is so much easier to do this than to refuse or to sift the truth of the story. This is simply another form of moral cowardice.

6. What should be done is to back up the social agencies, which are handling the problem, with adequate resources, so that they can expand their organization to meet the new requirements. It should be clearly understood that any saving attempted by getting an inferior or small staff is extremely shortsighted. The more ill trained and overworked the workers are the larger will be the amount they spend on relief and the less individual attention they will give to the families which is the essence of the whole matter. The average business man looks upon payment of staff with great suspicion as an "overhead" charge. This is due to a misunderstanding of the whole situation. Such short sighted economy defeats itself and wastes thousands of dollars in unnecessary relief the net effect of which is to undermine the morals of the family

which receives it. We have had 18 months of unemployment in Toronto and one can well hope that brighter days are shortly ahead. It should be clearly recognized that probably in no city on the continent has more been done than here. The Mayor and Board of Control have been criticized for not doing more. I would like to say that they have, in my judgment, done all that they could or should have done, that if they had gone beyond the present arrangements they would be justly open to censure. Everyone desires to prevent undue suffering, but if relief is too lavish the ultimate effect is worse than a too severe policy. There are at present over 6,000 families receiving city relief in Toronto. Something over 4,500 of these are families of the unemployed. There are about 150 single men nightly in the Wayfarer's Lodge, and about 180 to 185 at the G.A.U.V. Hostel in Evangelia Settlement.

During the past few months we have learned a number of things. We have groped through a wide variety of mistakes and have come to the point where we can really handle the problem intelligently. When it is over I could at any rate give an address on how not to dispense unemployment relief.

The chief moral which may be drawn is to improve the existing social organization whether public or private, so that it can stand the test of emergencies, as well as the work which comes to it in more normal times.

News Notes

The annual meeting of the Canadian National Committee for Mental Hygiene was held this year in Montreal, the spacious ballroom of the Ritz Carlton Hotel being crowded with representative citizens from various parts of the Dominion. Addresses were made by Her Excellency Lady Byng of Vimy, Sir Vincent Meredith, Bart., Dr. C. F. Martin, Dr. C. K. Clarke, Sir Athur Currie, Dr. C. K. Russell, and Dr. C. M. Hincks.

The year's record of achievement was inspiring. A mental hygiene survey of Alberta had been completed. Much clinical work had been accomplished in Toronto and Montreal. Studies had been conducted in primary schools in nine cities. Dr. C. K. Clarke was loaned for four months to the Federal Department of Health for psychiatric work in connection with the examination of immigrants. Dr. E. A. Bott had conducted a study in a large school to determine the value of group tests. Mr. N. L. Burnette had been invited by three provinces to advise concerning the development of Occupational Therapy in mental hospitals, and had also conducted an experiment in the classification of handicapped labour in a large employment bureau. British Columbia and Manitoba had made great strides in providing facilities for the care of the insane and feeble-minded along the lines suggested by the Committee. The Nova Scotia Legislature had passed bills embodying the recommendations of the Committee's survey of 1920, and Prince Edward Island had requested a mental hygiene survey.

The splendid work done in the Provincial Hospital for the Insane at Battleford is being further extended. Looms have been set up, and some fine rugs made. Work in stencilling and block printing has been started, and copper work and book-binding will soon be in full swing. Plans are being made for occupational therapy in the new hospital at Weyburn. Like Illinois across the border, Saskatchewan bids fair to carry our own middle-west into first place in the scientific use of occupational therapy as an important factor in the treatment of the mentally sick.

We are in receipt of an interesting programme of two public meetings held in Ottawa, in the Palm Room of the Chateau Laurier, March 17th, as a fitting climax to four days' joint conference between the Executive Council of the Canadian Association for the Prevention of Tuberculosis and the Tuberculosis Experts of the Department of Soldiers' Civil Re-Establishment. A symposium "On Finding Cases," scheduled for the afternoon meeting, concluded by Dr. Parfitt on "Modification of Classification of Clinical Tuberculosis." The two speakers for the evening meeting are the Hon. Dr. Beland, Minister of Health and Soldiers' Civil Re-Establishment, and Dr. Donald Armstrong of Framingham fame speaking on "The essentials of an effective campaign against Tuberculosis."

A dinner was given by Hon. Dr. Roberts at the Saint John Club, February 14th, to Dr. R. E. Wodehouse, Ottawa; Dr. Melvin, Fredericton; Dr. Carmichael, River Glade; Dr. Farris, and Dr. Warwick, of Saint John. Matters pertaining to the joint conferences of the Canadian Public Health Association and the Canadian Association for the Prevention of Tuberculosis, Saint John, June 6th, 7th, 8th, and 9th, were under discussion. Drs. Carmichael and Farris were designated local Convener and Secretary respectively for tuberculosis programme.

Dr. Burr, Professor of Mental and Nervous Diseases in the University of Pennsylvania, spoke to a representative gathering of citizens at luncheon on March 1st, taking for his subject "The Relationship of Mental Hygiene to the Community." Great interest was aroused and it was felt that Hamilton stood in need of a psychiatric clinic. Dr. Burr visited the various hospitals in the city, and at night delivered an address before the Hamilton Medical Association.

The Hon. E. H. Armstrong, Minister of the Nova Scotia Government, attended a meeting in Dr. Hattie's office, February 20th, to discuss with Mr. Colwell, Dr. Bruce Almon, Dr. T. M. Sieniewicz, Dr. B. Franklin Royer, Dr. D. A. Craig, Dr. R. E. Wodehouse and Dr. Jost, co-operative schemes for Diagnostic Clinics, favorable action being anticipated.

Premier Bell of Prince Edward Island, on February 16th, discussed with Mayor Jenkins of Charlottetown, Drs. Johnson, McGuigan, Garrison, Wodehouse and Mr. McCarey, the possibility of reopening Dalton Sanatorium, and ways and means of establishing Chest Clinics on the Island.

Miss Jean Browne has been appointed Director of the Junior Branch of the Canadian Red Cross Society.

Miss Browne was formerly Director of School Hygiene in the Department of Education of the Province of Saskatchewan, and last year held the Canadian scholarship in the International course in Public Health Nursing arranged by the League of Red Cross Societies at King's College, London, England.

The programme for the annual meeting of the Ontario Health Officers' Association to be held in Toronto on May 29th and 30th next, is now being prepared. The main thought in drawing up this programme is to make it as practical as possible, so that those who attend may gain information and suggestions that will help them in their work from day to day.

Among the visiting speakers will be Dr. M. J. Rosenau of Johns Hopkins University, author of the text book, "Preventive Medicine." The subject of his address will be "Food Poisoning," a topic to which he has given much attention.

The condition of our milk supply is of vital interest to everybody. It is more than a Provincial problem—it is a national problem. In consequence a symposium of "Milk," its production, patteurization and distribution will be one of the features of these meetings on May 29th and 30th.

Among the local speakers will be: Dr. Lailey on "Prenatal Care," Dr. Colin Campbell on "Eye Conditions," Mr. F. A. Dallyn, Provincial Sanitary Engineer, on "Soil Pollution," and Dr. Grant Fleming, Deputy Medical Officer of Toronto. Dr. Hastings will speak on "The More Efficient Care of Mothers."

Arrangements are also being made to show films dealing with subjects of interest to everyone engaged in Public Health work. A large attendance is expected.

The annual meeting of the Ontario Branch of the Canadian National Council for Combating Venereal Diseases will be held in London.

A very instructive and interesting meeting under the Department of the Discharged Soldiers' Civil Re-establishment in connection with the treatment of tubercular ex-soldiers was held in Ottawa March 14th, 15th, 16th and 17th, and undoubtedly the conference will improve the standard of treatment for the ex-soldiers. Among the speakers was Dr. J. G. Cunningham, Division of Industrial Hygiene, Provincial Board of Health, Ontario, who read an interesting paper entitled: "Means of Spotting Cases of Tuberculosis in Industry."

In connection with this meeting the Canadian Association for the Prevention of Tuberculosis held two rousing meetings at which propaganda used against tuberculosis was dealt with in a popular way. These meetings were very well attended.

The annual meeting of the Toronto Social Hygiene Council will be held in Tononto on March 28th.

At the last meeting of the Provincial Board of Health of Ontario Dr. Adam Wright, the popular chairman, was presented with a beautifully framed photograph of himself. Many members of the staff were present. The presentation was made by Dr. Casgrain who eulogized Dr. Wright's life work as that befitting the best type of citizens. Dr. Wright is well known and respected all through the province. In his reply the chairman thanked the members of the Provincial Board for their kind remembrance, and paid tribute to the harmonious work carried on by the Board, and the happiness it gave him to be associated with such a smooth running and efficient institution. To Dr. McCullough, the Chief Officer of Health, he gave great praise as the man who deserved the greatest credit for the progress made by the Board of Health in the past decade. He took great pleasure in presenting the portrait to the Board. Dr. McCullough, in accepting the gift on behalf of the Provincial Board of Health, stated that the portrait would occupy an honored place on the walls of the Board Room.

A second copy of the portrait was presented to Mr. Adam Wright.

"The most despicable case I have known in many years," were the words of Magistrate Heffernan, of Regina, in sentencing a married man to the maximum penalty of $100 or 3 mnoths' imprisonment, when convicted on a charge of knowingly infecting a young woman of the city with syphilis.

The case was prosecuted by an official of the Saskatchewan Bureau of Public Health under the provisions of the Venereal Disease Act, as a result of investigations made by the Bureau when the condition of the girl was first made known.

Ruined physically by the loss of sight of one eye, as stated by the Commissioner, Dr. M. M. Seymour, such is the punishment inflicted on this young girl by the wanton who has grafted another branch upon the tree of venereal disease.

Under provision made by the Provincial Government to combat the spread of this terrible plague, the girl is receiving treatment, and is on the road to recovery, but owing to lack of treatment in the early stages, the sight of one eye is irrecoverably gone.

In the modern treatment of syphilis every hour counts, as is well illustrated in the case of this girl, and whatever remedies medical science has given us are impotent, until those people who acquire venereal disease realize their condition, and consult a qualified physician at once.

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF JANUARY, 1922.

COMPARATIVE TABLE.

	1922		1921	
Diseases.	Cases	Deaths	Cases	Deaths
Smallpox	170	0	902	3
Scarlet Fever	518	14	613	17
Diphtheria	486	54	876	63
Measles	205	3	595	9
Whooping Cough	89	5	396	9
Typhoid	28	5	43	13
Tuberculosis	160	151	166	114
Infantile Paralysis	2	0	3	3
Cerebro Spinal Meningitis	77	6	2	2
Influenza	34	31	34	18
Pneumonia	......	288	......	271
	1699	557	3630	522

VENEREAL DISEASES.

Reported by Medical Officers of Health for January, 1922.

	1922 Cases	1921 Cases
Syphilis	183	195
Gonorrhoea	195	245
Chancroid	1	12
	379	452

It is most gratifying to be able to report a marked decrease in the cases of communicable diseases in the Province, for January last compared with January, 1921, as may be seen in the Comparative Table. It will be observed the total cases reported are less than one-half. The most noticeable decreases are in smallpox, scarlet fever, diphtheria, measles and whooping cough. The increases in deaths are in tuberculosis, influenza and pneumonia.

VENEREAL DISEASE REPORT OF THE DEPARTMENT OF HEALTH, OTTAWA, FOR THE YEAR 1921.

Month.	Number of cases treated in clinics.	Number of cases reported by physicians.
January	1,095	1,369
February	974	1,204
March	713	1,349
April	683	1,221
May	683	1,520
June	914	1,129
July	799	1,041
August	814	1,184
September	724	1,241
October	839	1,315
November	843	1,293
December	819	1,323
	9,900	15,189
Total	25,089	

Editorial

SQUINT AND DEFECTIVE VISION.

A startling fact is just coming to light. There are thousands of one-eyed people in the country. Moreover—and this makes the matter all the more serious—the number of these one-eyed people is continually being added to.

Everyone knows that crosseye or squint is common among children, a condition that can easily be put right with the proper glasses or by operation. What the public does not know, unfortunately, is that the vast majority of these children with squint have defective vision, and that many, far too many, are blind in one eye. When one says blind, it means what doctors call amblyopic. All of these children can see light from darkness, and many can even count one's fingers held up in front of them when their sound eye is closed. The dimness of sight in such people is permanent, and the obstruction cannot be removed. It is too late to make them see clearly.

How did these people become one-eyed, one may ask? It very probably happened this way:

Take any one of these unfortunate people as an example, and go back to his or her childhood days. Just about the time the youngster was able to leave its mother's apron strings and toddle about alone, a squint, i.e., a cross-eye, developed, but passed unnoticed. No doctor or nurse had examined the child, and the parents were not aware that anything serious was wroug. Perhaps the cross-eye was noticed, but defective vision never suspected, so that nothing was done, it being thought that the child would "grow out of it," or the parents may have been ill-advised and taken the child to one who fitted glasses, instead of to a qualified medical practitioner.

In this case permanent injury may have resulted from failure to correctly treat the defective eye. It may even have been given proper glasses, while the blindness of the eye was left neglected. It is recognized by authorities in all countries that eyes of young children cannot, with any certainty, be correctly tested for glasses without the use of drugs which a licensed medical practitioner alone may use. If the defective eyesight remains unnoticed for a time, the strain put upon the eyes when the child commences its school studies will show that something is wrong, and the worried father or mother may realize after a time that the child should be examined. But there is every likelihood that it may be too late to effect a cure. Defective vision from this cause should be treated before the age of five, and if the defect is not rectified by six years of age, there is practically no hope of permanent improvement being brought about.

Apart from the personal affliction of poor vision, one can easily realize that an individual with a defective eye may be both a loss to the state and a menace to the community. Means must, therefore, be found to warn the parents of children with defective eyes of the danger of permanent injury resulting through a delay, so that an examination of the children's eyes may be made by a qualified practitioner at the earliest possible moment.

Current Literature Dealing With Venereal Diseases

These abstracts are available through the courtesy of the American Social Hygiene Association, February 15, 1922:

BUFFALO FOUNDATION'S SURVEY OF THE UROLOGIC CLINIC, HEALTH CENTRE DISPENSARY NO. 5. *From the Report of Frances M. Hollingshead, M.D., Director of the Buffalo Foundation.*

The Board of Managers, Department of Hospitals and Dispensaries, requested the Buffalo Foundation to make a social investigation of the Urologic Clinic. Herewith is an abstract of the facts disclosed by this investigation:

The venereal disease clinic of Buffalo occupies a series of rooms in the Health Centre Dispensary Building. The personnel consists of a part-time physician-in-charge, five part-time assisting physicians, a head nurse and an assistant, an orderly, and a clerk. The quarters are thoroughly sanitary.

As a result of the investigation the Buffalo Foundation comes to the following conclusions:

The clinic managed under the municipality becomes a very important part of the educational program being carried on for the cure and prevention of venereal disease. Buffalo should enlarge the local program very much. There is need for much education through lantern slides, lectures, and films, by qualified persons. Industrial concerns should cooperate strongly in this.

The Buffalo Department of Hospitals and Dispensaries deserves much credit for having entered this field very early on the curative side and for having done a very creditable piece of work. Other agencies ought to do their share to develop the preventive and educational activities.

Much education is needed to instill into the minds of the public the knowledge that venereal disease must be treated as an infectious disease and cured as completely as possible, and that such conditions will never be attained until the public accepts the conditions as they are and agrees to do away with the traditional wall of mystery which has been established about the whole matter. This requires the cooperation of the health department, the department of hospitals and dispensaries, public schools, women's clubs, and the nursing association. The clinic, however, must be the centre around which the work revolves.

The clinic at Health Centre No. 5 is not perfect, but it is very much in advance of other city clinics and can be made a model clinic. The public's share in this work is to give generously of the city money to secure the best.

SYMPOSIUM ON SYPHILIS. *Pennsylvania Journal of Medicine, January,* 1922.

The symposium on the treatment of syphilis held during the General Meeting of the Medical Society of the State of Pennsylvania, Philadelphia Session, October 5, 1921, included a number of papers of interest to the progress of the control of syphilis. Jay Frank Schamberg who read the paper, "Modern Conceptions of the Treatment of Syphilis," concludes that no crystallized formula of treatment can be adapted to all cases, and in no disease is individualization more essential than it is in syphilis. Thomas McCrae, whose paper dealt with the treatment of visceral syphilis, believes that the cure of that form of syphilis is more or less uncertain. Mercury is an important aid. In aortic syphilis the dosage of arsphenamin or neoarsphenamin should be small, and in hepatic syphilis, not at all. The Wassermann reaction, whether negative or positive, should be regarded conservatively, he asserts.

The paper on neurosyphilis, read by Harry C. Solomon, emphasized the following points: Neurosyphilis often develops during the course of the usual routine antisyphilitic treatment, in which case the treatment must be considered inefficient. The method of treatment must depend upon the individual case. Often mercury and iodides may succeed after arsphenamin fails to effect a cure. The spinal fluid is not the major criterion, as patients whose fluids remain pathological may recover clinically, whereas patients whose fluids become negative may succumb from neurosyphilis. In closing, Dr. Solomon says:

I would have you believe that I am optimistic about the treatment of neurosyphilis. Not all cases can be helped. But many cases which are considered incurable can be greatly benefited by intensive and prolonged treatment of the proper sort. We have at our disposal the means with which to help many cases of neurosyphilis, including meningitis, tabes, and paresis. Many of these cases are considered hopeless because of inadequate handling.

In the discussion that followed the presentation of the papers, Dr. Schamberg makes the following pertinent statement:

If there is any maxim or principle that we may set down in the treatment of syphilis, it appears to me that *the hazard of the treatment should be measured against the hazard of the disease.*

TYPES OF PATIENTS AT THE UROLOGIC CLINIC OF BUFFALO. From *the Report of Frances M. Hollingshead, M.D., Director of the Buffalo Foundation.*

During the period of 30 days in which the social investigation was being made, there were admitted to the clinic 165 new patients, 133 white and 32 colored. Of the 165, only 27 were females, but indications are that with further separation of the sexes the attendance of women will be markedly increased.

The ages ranged from nine to 79 years. Children under 16 are sent to the children's clinic for regular treatment. The marital condition of the patients is as follows: Of the 138 males, 34 were married; of the 27 females, 19 were married.

Of the 165, one hundred and eight were located either at or from their homes. The numbered of unlocated persons after one interview represented 19 per cent. of the total. Most of these had deliberately given fictitious addresses in order to cover up their tracks. A regular social worker employed permanently in the clinic could trace these patients by asking to have them sent back to the interviewer in their next visit to the clinic.

As regards employment, only 42 of the 165 were known to be employed. Four were students, and for four others no information was available. Of the 115 who were not employed, 14 had not been employed less than three months, 54 had been unemployed for from three to six months, 15 from six months to a year, and six had been unemployed for longer periods, up to six years; 27 failed to give length of unemployment. The majority had been engaged in common laboring jobs, in factories, railroads, steel mills, etc.

The occupations can be classified into 37 different groups. The two largest are common laborers and factory workers. Some of the others were sailors, chauffeurs, garage workers, steel workers, domestic servants, motormen, and even a clergyman.

Of the 42 who were employed, six were earning less than $10 a week, 17 were earning from $10 to $19 per week. Of the latter, five have from four to six dependents. Twelve patients earn between $20 to $29. Only five patients earn from $30 to $40. Most of the patients earning from $20 to $40 have dependents, which makes clinic treatment the only kind that they can have available within their budgets.

In general, the facts as brought out by the survey of the Buffalo Urologic Clinic indicate that the maintenance of a clinic for the diagnosis and treatment of venereal diseases is absolutely essential to preserve the public health of the community.

Notes on Current Literature

FROM THE HEALTH INFORMATION SERVICE, CANADIAN RED CROSS SOCIETY.

Three Eras of Public Health.

Since 1850 the health movement has passed through three eras. During the first 30 years of this period attention was directed towards sanitation. From 1880 to 1910 infectious disease work was actively prosecuted. Then began the era of education in personal hygiene and the prevention of disease. Sufficient scientific knowledge now exists to enable us to prolong the average life by many years and to increase the joy of living that goes with good health. The modern health problem is to get modern health knowledge translated into the lives of the people. ("The Commonhealth," December, 1921, p. 259).

Milk as a Factor in Health.

Good milk is the best of foods. Bad milk causes more illnesses and deaths than all other foods combined. This article, approved by the Surgeon General of the U.S. P.H.S., explains how milk should be handled in order to overcome the dangers of a food of prime necessity becoming a menace to life and health. —("The Nation's Health," February, 1922, p. 60.)

Nems and Calories.

Many authorities consider the calorie to be a poor standard for the measurement of food values and suggest the substitution of the nem, which takes account only of the food that can actually be assimilated by the human being.—("The Nation's Health, February, 1922, p. 86.)

Child Health in Europe.

The present condition of child health in Europe as described by the Medical Director of the American Red Cross in Europe. —("Journal of the American Medical Association," February, 1922, p. 454.)

Progress of Child Hygiene Work.

The General Director of the American Child Hygiene Association reviews the progress during the past year of child hygiene work in the United States.— ("Mother and Child, February, 1922, p. 65.)

The Sheppard-Towner Act.

An abstract of the new law for material and child welfare in the United States.—("Health News," January, 1922, p. 19.)

Health Contest for School Children.

A detailed description of a successful method for teaching school children the game of health. This information will be useful to Junior Red Cross branches.—("The Commonhealth," December, 1921, p. 279.

Health of School Children.

The report for 1920 of the Chief Medical Officer of the Board of Education of England and Wales,

Dental Dressers.

The problem of a school dental service in the rural districts of Derbyshire, England, has been solved by the employment of dental dressers to relieve the qualified dental surgeons of routine work that can be done by intelligent women with six months' training. The system has proved highly successful.—("Public Health, S.M. O.H.", January, 1922, p. 89.)

Care of Mental Defectives.

A description of New York State's plan for the care, training and education of mental defectives, of whom there are 45,000 in a school population of one million.—("Mental Hygiene," January, 1922, p. 57.)

Travelling Chest Clinics.

An account of the useful work accomplished by the travelling clinics of the Wisconsin Anti-tuberculosis Association.—("The Nation's Health," February, 1922, p. 78.)

Flies and Disease.

Proper waste disposal in relation to the fly disease.—("The American City," February, 1922, p. 78.)

Book Review

A Half Century of Public Health, Jubilee Historical Volume of the American Public Health Association, edited by Mazyck P. Ravenel, M.D.

The foreword of this remarkable volume quotes from Osler: "For countless generations the prophets and kings of humanity have desired to see the things which men have seen, and to hear the things which men have heard, in the course of this wonderful nineteenth century. To the call of the watchers on the towers of progress there has been the one sad answer—the people sit in darkness and in the shadow of death. Politically, socially, and morally the race has improved, but for the unit, for the individual, there was little hope. Cold philosophy shed a glimmer of light on his path, religion in its various guises illumined his sad heart, but neither availed to lift the curse of suffering from the sin-begotten son of Adam. In the fullness of time, long expected, long delayed, at last science emptied upon him from the horn of Amalthea blessings which cannot be enumerated, blessings which have made the century forever memorable; and which have followed each other with a rapidity so bewildering that we know not what next to ex pect." The volume comprising a symposium by many authors on the progress of public health during the last fifty years tells succinctly the facts of a story of scientific achievement beside which the stories of medical progress in all previous similar periods pall into insignificance.

Commencing with a short article on the Progress of Public Health, 1871-1921, by Dr. Stephen Smith, founder of the American Public Health Association, the volume contains eighteen additional articles by well-known authorities on progress in the various fundamental branches of public health. These include the History of Bacteriology, the United States Quarantine Service, the History of State and Municipal Control of Disease, Stream Pollution, the History of Child Welfare Work in the United States, the History of Industrial Hygiene and a Fifty-Year Sketch of Medical Entomology and Its Relation to Public Health.

As an epitome of public health progress the volume is of great value. Every page is full of interest. The preparation of such a compilation is a credit to its originators and its editor. The very existence of a volume telling so brilliantly of the great achievements of the past so short a time behind us should be a stimulus indeed to our efforts directed towards the welfare of mankind in the future.—G.A.B.

The Public Health Journal

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Health Propaganda

BY DR. J. T. PHAIR,

Section of State Medicine, Academy of Medicine, Toronto, November 29th, 1921.

IN any discussion on the subject of Health Propaganda, probably the most important single thing to be borne in mind is, that nothing worth while in Preventive Medicine is possible without the great mass of the people being willing to accept, and aid in such a forward movement. I mean that briefly, Public Health legislation is worth next to nothing unless preceded by a liberal attempt at real practical Health Education.

If we accept this fact as true, then our problem is: how best to disseminate to every corner of the community the great mass of knowledge that now lies ready to hand, in the keeping of all Health workers. The distributing of this knowledge, and in so doing the arousing in all, of a better appreciation of the need for, and value of "Better Health," is my interpretation of "Health Propaganda."

And now may I be pardoned if I compare the task of disseminating this knowledge, to that faced by a business house entering the market with some new household commodity; and anticipating your pardon I proceed. Let us first consider then, what we have to sell, the many types of customers, and our best plan of salesmanship. We have two great classes of wares, Personal Hygiene and Community Hygiene, the first dealing with the actions and habits of the individual as they relate to himself, and the second as they relate to all those who make up the centre in which he lives. As to which of these two is the more important, and as to which of these two we should first stress, a great deal of time and thought has been given, but our interest in the matter is not sufficient to warrant our giving it more than passing comment.

As it is very requisite for any good salesman to know the selling points of his wares, it is equally necessary that all those interested in the advancement of Preventive Medicine should be very familiar with the various phases of the Better Health Movement which will appeal to the various groups which make up any community. For example, you may arouse interest in a group of business men as to the value of this work, by appealing to their civic pride or to their natural desire for increased production, thus selling City Sanitation or Industrial Hygiene, or you may interest the artisan class from the viewpoint of personal comfort, or self-preservation, and aid in the accomplishment of the same thing.

Again in attempting to arouse interest in the matter in hand, the first step is to make those you are trying to reach, appreciate their lack of what you have to offer, so that we must gather all the facts and figures, (the more facts and the less figures the better), as to existing conditions, and have them available for each and all of those actually doing the work. To be more explicit, if it is decided to carry on a campaign with the object of covering the Infant Death Rate, it is first nceessary to know exactly what the Infant Death Rate is, and what it has been for the last 10 to 20 years, how it has fluctuated, whether the trend is downwards or otherwise, what factors have influenced it during that period, and what natural factors can be counted on to influence it in the future; such as epidemics, congestion and overcrowding, the presence of a large foreign population, and the signs of an awakened interest on the part of the community itself. Then you review the number of allies that you can count on, private organizations and groups who are already interested, and the class and sections they represent. Then you must give much thought to the question of the different groups, and how best they may be reached, how much one group can be depended upon to influence another, and with which one to start. Then keeping all of these things in mind, you carefully check up the personalities and qualifications of each individual member of the staff carrying out the work, and lastly make an earnest effort to link up all of the organizations interested, before launching your campaign.

Now we are ready to review the existing channels that could be used for the spread of our information; such as, personal contact, lectures and talks, newspapers and magazines, posters, billboards, and street car advertising, the use of the mails, moving pictures, the Church, Sunday School and Day School. In briefly mentioning each of these as a possible means of getting across to the great mass of the people our object, we must constantly keep in mind that we have three classes of people to deal with; those interested, those frankly opposed, and those who are apathetic, also that no two centres are absolutely comparable, and that methods that are highly successful in one community are often a failure in others.

Let us then elaborate a bit as to the value of these many channels. First, what I have been pleased to call "Personal Contact." This to my mind is one of the best methods of meeting with and influencing many otherwise difficult to reach, and if the personality of the worker is such that it carries conviction, this is a method that at no time should be neglected, and lectures and talks, if made short, bright, and suited to the type of audience present, are of exceeding value.

Another useful medium is "The Press," and it is felt that if given as news, not articles, and if not stilted or academic, much valuable Health information can be made to reach an exceedingly large group of the people. Not that I wish to decry the use of many of the well-written articles on so-called Health Topics, but I feel that these are read and appreciated, not by the masses, but by the relatively small group who are already interested, and while in adding to their knowledge they have a definite value, they are not as important a factor in Health Education as one might believe. And the present great need, if the full advantage is to be taken of the enormous circulation of our daily papers, is that this vital information should be read by all. And if this is to be made possible, it is only by the publishing of our facts, not opinions, in a readable, newsy way.

The use of posters, and perhaps coupling with them, bill boards and street car advertising, is another very useful and valuable method of Health Propaganda, which has too often been misused or neglected altogether. If much is to be expected from these, they must be snappy, simple, and slogan-like, and each one limited to the driving home of one idea only.

As regards the sending of circular letters, it is felt that this is of doubtful value, as they lack the personal touch, so necessary to make these things worth while, and too often are relegated, unopened or unread, to the scrap basket.

Now we come to the use of Motion Pictures, in the field of Health Propaganda, and while undoubtedly "the Screen" can aid materially in illustrating some phase or another of the many Public Health activities of any community, to my mind they have been over-rated as a factor in the education of the general public, to the value of Preventive Medicine. Chiefly because the large majority of the people attend the Motion Picture House, frankly with the object of being entertained and amused, and it is exceedingly difficult to make any Health Picture both Educational and amusing. However this has been attempted, and we await with interest the result of the experiment. In the meantime we must not be satisfied to sandwich in between, a few reels of a modern problem play, and a slap-stick comedy, two or three hundred feet of film, on the House Fly as a potential factor in the spread of disease, and feel that we have accomplished something, because I am inclined to doubt it. Still the Motion Picture if we can only harness its possibilities should be a mighty agent in teaching Good Health.

In reserving for the last the school room as a centre for the radiation of Health Propaganda, I am simply following out the old adage of "Last the Best," and in defence of this view I ask you to remember that the whole question is one of Education, and also that the majority of adults are conservative and are all too prone to desire nothing more than "to be left alone with their Idols." And it is necessary if we are to accomplish much, that we attempt to have, those who are to be the adults of to-morrow, do intuitively what the adults of to-day have to be urged to do. And it is with this in mind that I stress the claims of the school room as the greatest force, if well directed, that we have to-day in this Better Health Movement. Largely because it is possible to reach the individual when he or she is at an impressionable age, before bad Health Habits have become too firmly fixed, and also because the subject is taught in an atmosphere that savours of things Educational, and is absorbed as such.

And in conclusion, permit me to again emphasize the urgent need for those of us who are interested more directly than others, in the spread of the Doctrine of Good Health, to appreciate that the chief value of the Health worker, lies not in his or her ability, in the field of administration, research or legislation, but in his or her ability to create a demand on the part of the people of the community they serve, for a wider knowledge of the value of Good Health and its efficient enforcement.

Some Aspects of the Mental Hygiene of Childhood

BY DR. HYMAN C. COLE.

THIS has been called the century of the child. The various branches of sociology, psychology and medical science have been giving more consideration to the welfare of the child during the past twenty years than ever before. That this attitude is of recent origin is shown by the fact that even at the present time certain tribes of New Guinea frequently kill and eat their children. During the famine in Japan in 1783 children were killed and eaten. The Israelites sacrificed the first born to God. In India, until only recently, the first born was sacrificed to the Ganges. The killing of children as a result of economic stress was widely practiced among our own forefathers. The population of tribes was kept within the limits prescribed by the supply of food in this way. Naturally the least desirables were disposed of, such as the deformed and the weaklings. These practices constituted a primitive form of eugenics. Even well into the Middle Ages a child's life was held in little esteem. Among the Franks the killing of a girl before the age of twelve was punished by a fine of 200 sous. Under the Roman law, children were the property of the father, and he might put them to death or sell them as slaves. Even in comparatively modern times children have been sold under conditions of economic strain. In the sixteenth and seventeenth centuries the status of the child in Europe was little less than horrible. They were openly abandoned in large numbers and were often purposely deformed to become professional beggars.

Another phase of the abuse of children has been seen in child labor. During the eighteenth century, while the modern factory system was developing, the employment of child labor and the abuse of children so employed became very prevalent. The conditions under which children were employed is almost beyond description. They were practically slaves and were bartered back and forth by mill owners. Only at the present time are we succeeding in entirely freeing modern industry from child labor. It is interesting to

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Read at the Informal Dinner, October 28th, 1921, during the Medical Baby Week, Hamilton, Ontario, October 24th,-29th, 1921.

note that the first society for the prevention of cruelty to animals was formed in 1823, while the first society for the prevention of cruelty to children was formed in 1874.

The recognition of the rights of children has made continued and rapid progress in recent years. We have laws to protect these rights. The child is not considered fully responsible for his acts and is not punished in the same way as an adult. The child is no longer the property of the parent, and the parent is obliged to administer an humane guardianship over the child. Parents are responsible for the care and protection of their children and education is compulsory. There are special courts to consider juvenile delinquencies, and special institutions where the State cares for children. Pediatrics is recognized as a distinct field of medicine. Philanthropic organizations attempt to save children through clinics, summer camps and the like. There is a special department of psychology devoted to the study of the child's mind. Through public playgrounds the right of the child to play is recognized.

We have made wonderful progress in the physical care of the child. Our knowledge of the diseases of children and of the science of Nutrition has grown rapidly in the last fifty years. Only recently, however, has much attention been given to the child's mind. We are just starting on an era in which the psychology of the child and of the parent, and the relation between them is to be given deep consideration. The recognition of the rights of the child has developed from a time when it was regarded as the property of the parent—to be killed, to be sold, or to be bound out at hard labor as the parent saw fit—until now the fundamental rights of childhood are fully established. The slowness with which the child has come into its right has been due to the fact that the parents felt that they owned it, and could use it as they saw fit for pleasure or profit. We now know that the child brings the greatest reward and satisfaction to its parents when it is brought up wholly from the point of view of its own welfare. Parents who sold their children into slavery realized an immediate and concrete return for them. Whereas now those who desire the greatest good from their children wish to see them develop into useful and efficient adults. The results are now postponed and are of a spiritual rather than a concrete character. In order for us to bring about the best ultimate result it is necessary for us to understand the source from which the child comes, its characteristics and its natural instincts.

Life is passed on from generation to generation through the medium of the germ plasm. The union of the germ plasm of the parents starts the development of a new individual, which grows into their likeness and which carries with it certain of their characteristics. Accordingly the child is not a distinct individual, but has a direct physical relationship to its parents. It is formed from the same material as they are and tends to develop in the same directions. The capacity for growth is definitely limited by the inherent qualities of the germ plasm. Certain tendencies are much more definitely limited than are others. All children develop arms and legs, and lungs and kidneys, but whether the eyes will be blue, is not nearly so definitely predictable, and further whether the character will be obstinate or pliable, or whether the child will be sweet tempered or ill tempered is very difficult to forecast. Thus we see that the child is not a separate and distinct creature, but is dependent, through its heredity, for many of its powers and limitations. It was formerly thought that a great deal of character depended upon heredity, but modern psychologists are placing much less emphasis upon this. Some students think that the child has character traits like its parents because from the time of its birth it is in the same environment. This is really the optimistic and progressive view to take of the subject, because if heredity were entirely responsible improvement would be blocked except through eugenics, which is known to be impracticable. It is best to provide heredity as providing the essentials of character, but the mood of the individual, his honesty, and similar qualities, are dependent upon environment. From the time a person is born until he dies he is constantly receiving impressions from his environment to which he reacts to adapt himself. A new born baby must learn to hear, to see, to smell, and to recognize the portions of its own body. It hears innumerable sounds and sees all kinds of colors and forms. Through touch it learns consistency and temperature. All of these impressions are absorbed and constitute the environment. It is the effect of this environment upon the individual and the effect of the individual upon the environment which we are able to influence. It is unfortunate that the child's world and the adult's world are often so widely separate, and that the adult so often fails to understand the child. The child is regarded as mysterious and the failure to understand it is the cause of much bad mental hygiene and even cruelty. However, the years of infancy and childhood are of enormous importance in the development of the character of the individual. Even through this early period of life the fundamental instincts, which control all human as well as animal activities, play a dominant part in development. There are in the main two instincts to which, in the last analysis, all the various activities of the individual can be reduced. These two instincts are the self-preservation or ego instinct and the race preservation or sex instinct. The self-preservation instinct is manifested immediately after birth. Practically the first act of the child is to cry because of discomfort, which is followed by relief from the mother or nurse. The child soon learns that crying produces quick relief from its discomforts, and in a short time learns to apply the crying for unsatisfied desires as well as discomfort. He learns to cry whenever he wants something. He cries when hungry, for candy, for a doll, or for anything; and it is only through the realization that there are some things which cannot be obtained in this way that the tendency is overcome. The child who has always had its wants immediately satisfied, simply by crying, learns to expect to go on living that way. The exertion required to satisfy its own wants is not made, and relief is expected as soon as its discomfort is manifested. Children brought up in this way in later life have weak characters and are very selfish and lack initiatives. They expect their wants to be forthcoming without their efforts.

On the other hand, persons possessed of some defect naturally feel themselves handicapped in the struggle for existence, and their ego instinct stimulates them, because of this feeling of inferiority, to overcome the defect. Such people not infrequently not only overcome their defect, but actually become superior through their struggle against it. This is illustrated by the fact that many of the advances in medicine have been made by men themselves handicapped by disease, which they have studied to overcome. So we see that the instinct of self-preservation extends widely into all of our activities from the first cry of the infant to the ultimate scientific advancement.

The race preservative instinct is for the purpose of perpetuating the species and has pleasure as its immediate motive. In its ultimate ramifications it influences nearly every activity of our lives and is largely responsible for the creative sides of our character. These two instincts are at the bottom of all conduct and usually are very closely intertwined. Personality and character are dependent upon the conflicts and compromises of these instincts. It is the function of mental hygiene to free the better more constructive tendencies from the domination of instincts which would, if allowed full play, impair the fullest possibilities of the individual. The repression of the fundamental instincts causes them to seek other forms of outlet and express themselves in activities constructive to the individual and the race.

Long before the child is born it begins to move its arms and legs in an aimless fashion and after it is born these movements are increased. While apparently to no purpose, they are of extreme importance to the child because through them it gets its first sensory experience. It comes in contact with objects that are hard or soft, which are cold or warm, and also obtains sensations from the movement of its own muscles and body. It sees, not distinct objects, but splotches of light and darkness. These in turn it learns to associate with the object which it touches. Sounds are heard in great numbers and they too come from the light or dark objects. The mother's voice, which is soft, is soon associated with the relief of discomfort, and the father's voice with authority. Thus the infant's world is very different from the adult's, and its interests are very limited. However, as it gets more and more impressions and comes into a greater understanding of its environment, its interests rapidly stretch out. This is true throughout one's entire life. As the individual grows and develops his interests become broader and deeper in proportion to that development. We must recognize at this point that the driving forces, which direct the child's interests, are the primary instincts of self-preservation and race-preservation—or more simply, hunger and sex. The ego instinct shows itself very early. If the child drops its rattle and shows impatience, the mother picks the rattle up and gives it to the child. The child, pleased at its control over its environment, throws the rattle on the floor again, and finding the cycle repeated develops a tyranny over its surroundings. However, this absolute power cannot go on indefinitely for the mother eventually tires, and the child learns more of its real relationship to its surroundings. Children who are humored at this stage of development, are prevented from learning their limitations and later on become domineering and selfish and are unable to adjust themselves to their limitations.

During the first four years of life the infant lives entirely in response to its instincts. Most of this time is spent in acquiring new experiences and building up a background of information as a basis of further development. It becomes acquainted with itself, learns to distinguish the parts of its own body and learns through pain the safe limits of its activities. The instincts of hunger and pleasure hold full sway. Whenever hunger is felt food is taken, and in fact everything that is within reach is put into the mouth.

There is no choice exercised over the character of the food, and the child's welfare is dependent upon the intelligence of its caretakers, which, unfortunately is often sadly lacking. At first the child's conduct is completely controlled by his pleasure. It has none of the inhibitions to conduct which characterize adult life. If he chooses to discard his clothes and revel in his nakedness, he does so without the slightest concern for those present. The movements of the bowels occur without consideration of time or place, and in the same way these instincts are yielded to other tendencies are indulged without restraint. Curiosity particularly, is unrestrained. Almost all children are at one stage of their development ask incessant questions on every conceivable subject. This offers a wonderful opportunity for teaching, but many of the questions must be very tactfully dealt with. A universally asked question is—"Where do babies come from"? Generally parents sidetrack the question, and present the usual explanation that the stork or the doctor brings the baby. This is a serious error for it is not only a lie, but the child also is not satisfied with the answer, and feels that the parent is not giving him sufficient consideration. The natural result is for the child to turn away from the parent, who should ordinarily be its source of help, and obtain its information from less wholesome sources. A frank answer should always be given to this question. A child that is able to ask such a question is able to understand a simple truthful answer. It is a mistake to attempt to give a detailed explanation. A fundamental principle to keep in mind when meeting this question is to give only the information sought and no more. A very good answer to the question is—the baby grows in mother's body. In this case the child has been given the seriousness it deserves and the question has been answered truthfully. This will suffice for a time and subsequently additional questions will be asked, which can be similarly dealt with and will gradually clear up the situation.

Another characteristic of this period is scientific self interest. If the child desires the toy of a playmate it proceeds to take it away from him without hesitating to give a slap if necessary. The crying of the playmate is unheeded as are the feelings of others in general. It is quite common for a young child to enjoy inflicting pain either upon brothers and sisters or upon animals. A considerable amount of jealousy, particularly toward a younger child in the family, is very often manifested, and is often felt toward the father because he takes the mother's attentions away from the child. All these tendencies are purely selfish, and the child must learn that there are others who have to be considered. If it has taken a toy from a playmate and administered a slap, some day another child does the same thing to it. This constitutes a very different form of experience and by such contacts, usually painful, it learns to appreciate the privileges of others, and develops that respect and understanding and sympathy, which are the basis of human society.

The first four years of life constitute the time when the fundamentals of character are laid, and it is safe to say that they are also the period during which the least thought is usually given to such matters by parents. It is the golden period of educational possibilities and the responsibility for its improvement rests entirely with the parents. As the child grows older and passes into its fifth and sixth year the primary instincts, as such are modified to conform to our moral and social standards. This change involves chiefly the repression of the instinctive tendencies and a definite effort to overcome their promptings and become conventional according to moral and social standards of conduct. Toward this nakedness he reacts with shame and toward the bowel movements with disgust. Shame and disgust are usually developed by reactions of adults in the immediate environment whenever the child violates the standards of conduct. Shame develops as a reaction against things sexual—disgust against things filthy. These sensations constitute barriers to the development of the instincts in certain directions, and one of the main problems of mental hygiene is to find an acceptable and useful escape for these repressed instincts. The strength of the reaction of shame and disgust is proportional to the strength of the tendencies they have to hold in check. The object of these powerfully emotional reactions is to combat the equally powerful natural instincts.

At the time of puberty the child experiences a great emotional revolution. This is particularly associated with the sexual instinct. Adequate outlets for this instinct are not available in acceptable forms of conduct, and other avenues of expression have to be utilized. The instinctive feelings toward those of the opposite sex find expression in various sublimated forms. Such social activities as dances, picnics, and parties are used to develop relations between children which lead on to the experience of courtship, marriage and parenthood. In the same way the ego instinct is sublimated so that the demands of others are recognized and social intercourse is possible. Probably the most important single factor in the development of those characteristics, which form the structure of personality, is the relation of the child to the family group. The family consists of all the persons in immediate contact with the child. These are the first human objectives of the child's love, and the form and quality of this love is dependent upon the response of these others. A love that is not returned causes discontent, and even hate, on the part of the child, and, therefore, it is apparent how extremely important these first experiences are for the future. A fact which is seldom recognized is that there is distinct sex element in the relations of the parent and the child. The little boy prefers the mother and the little girl prefers the father, which is not only true of the child, but of the parents as well. Manifestations of jealousy on the part of children is very common, as between different children and particularly young infants. It is not so commonly recognized that jealousy also exists between children and their parents. The little boy who loves his mother may be jealous of his father because he receives so much attention that the boy feels should be his. Another tendency is to try to emulate the parent of the same sex so as to be able to take that parent's place in affections of the other parent. These emotional relations to the parent are of extreme importance because the child frequently develops traits of character which are dependent upon them. The father who is a tyrant may cause such antagonism in the child that later he is unable to yield to any authority whatever. It is of such stuff that anarchists are made. A judicious exercise of authority, on the other hand, creates an example of great usefulness in the shaping of the child's career. The various attitudes of the parents have much to do with the attitude of the child toward others, particularly other members of the family. This view of the emotional relation between the child and its parents is quite different from the ordinary conception in spite of the almost universal conflicts between parents and children. The reason for these conflicts is not difficult to find. It is very necessary that the child must break away from its parents. This is one of the most important points in the mental hygiene of childhood. The whole child's development has as its goal its emancipation from the parents so that it may be able to develop its own life and individuality to the fullest extent, without the hindrances that inevitably follow a continued attachment and dependence upon the home. Only by breaking away from the parental attachments can a crippling dependence be avoided. Parents should realize that this separation is fundamental and should have as their aim in the development of their children the expression of individuality and independent traits of character. Upon this depends not only the maximum of personal happiness and accomplishment but also of human service both to parent and to child. If we can bring ourselves as parents into this point of view, and aid others in so doing, we will have done much toward making this truly the century of the child.

The material in the above paper has been drawn chiefly from the following books:—"The Mental Hygiene of Childhood" by William A.White—Little, Brown & Co., Pub., 1919. "The Fundamentals of Child Study" by E. A. Kirkpatrick—Macmillan Co., 1907.

IMPORTANT ANNOUNCEMENT

ONLY those who do not care will stay away.

HURRY and make your arrangements for coming.

ONTARIO should not lag behind in Public Health progress.

ALL should attend the Ontario Health Officers' Convention.

CANCEL all other engagements for May 29th, 30th.

"How Life Begins"

BY MISS EDNA L. MOORE.

THAT so many citizens have been sufficiently interested in the work of the Local Hygiene Council to attend this Extension Course, augurs well for Hamilton. In thinking over this encouraging fact I recall an article by Miss Helen Rand in a recent issue of "The Survey." Miss Rand says, "Communities can't get anywhere unless they know where they are going; they can't accomplish anything until they know what they want to accomplish; they can't hitch their wagons to a star unless they can at least see their own special star."

The Hamilton Social Hygiene Council is planning an active campaign, and I should like to plead for a special hitching star in their program. It is the education of the immature population.

What must be taught and on whom must rest the responsibility of teaching? What objections must be met and overcome? Socrates left to the world the injunction "Know thyself." Years afterwards Marcus Aurelius said, "Man control thyself." This is logical sequence. As freedom extends and scientific knowledge adds to the power of men and women in doing evil, as well as good, the necessity of careful training of children to good moral habits, and of forming in the minds and hearts of youth, sound principles of self guidance to right conduct, becomes more and more important, than in the day of greater outside restraint and less power to do either good or evil. Our moral life must be strengthened to keep pace with the broadening of our material and social life. Otherwise the coming generation will be fully equipped to sin skilfully and without remorse.

The Moral Law and Ten Commandments must be taught and not simply as a Sunday School recitation. Their application to every day affairs should be clearly shown.

Obviously the parents must begin this education. Such knowledge is acquired line upon line. The atmosphere of the home during the years of infancy leaves its imprint upon the child. Infantile and childish impressions may become fixed. To illustrate, may I tell a story? A small boy was playing with his little sister. The

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Read before the Hamilton Social Hygiene Council, Nov. 2nd, 1922. At this meeting the moving picture, "How Life Begins," was also shown.

sister said, "Let's play being married." To which her brother answered, "All right. I'll throw the dishes and you cry." Can we afford to "stand afar off" or "pass by on the other side" while the very foundation unit of civilization, the family, is threatened? Men and women must realize their parental and civic responsibilities. Ignorance is never an effective armament. True protection is in knowledge. It is impossible to shield the young mind from every source of knowledge; they are too numerous, nor do we wish to withhold the truth.

Dr. Prince A. Morrow says, "There can be no greater satire upon creative wisdom than to assume that a knowledge of the function which is given to co-operate in the Divine Mission of creation is not fit to be taught to young people." Some parents and teachers seem to consider sex an indiscretion on the part of the Creator. Viewed in the right light sex and the ever recurring miracle of generation and birth are subjects full of nobleness, purity and health.

A writer in "The Child" magazine says, "Many parents assume that nature leads rightly in the matter of sex and that instinct is the true teacher. This perilous fallacy is accountable for much mental suffering, bodily disorder, and vice. Nature teaches the animal assailed with a periodic appetite how to appease it without injury to itself, to offspring, and the herd. Man lacks this automatic direction of behavior. He cannot find his way in the jungle by scent or by a mysterious faculty which is the secret of the brute and the migratory bird. In all of his supreme activities man is forced to employ reflection, reason and the method of trial and error. A mouse knows the right way to nourish and bring up her young, while a civilized woman without experience needs instruction in the care of her children."

The greatest impediment to education in sex ethics and hygiene is prudery. Someone has defined a prude as an abnormality at variance with the whole scheme of nature, tolerating the acquiring of questionable knowledge from the gutter but horrified at scientific truth regarding the physiology and psychology of sex. Let us take stock of our thoughts and know just where we stand, because children are very keen in discerning hypocrisy.

We must ever advance. Dr. Todd, in his book "The Scientific Spirit and Social Work," says, "We must cultivate the adventurous attitude in social work—a willingness to keep eyes fixed on potentialities and futures rather than blindly to accept the rut of traditional procedure.

All social hygienists should be familiar with the investigations of Freud and his school in the realm of the psychology of the unconscious. He claims to have demonstrated that the germs of the sexual nature are present at birth and has traced three periods in the development of sexuality:—First, the infantile or pre-inhibitory period lasting to the 3rd or 4th year; second, the childhood period, up to puberty, and third, the adult period or that of object love.

First, it is termed pre-inhibitory because a child of this age freely expresses its sexual nature. It is not impeded by feelings of shame, disgust or modesty. In the infant there are found certain impulses that encountered in the adult, are termed perversions. A small child finds pleasure in viewing its own body and also has the corresponding impulse toward exhibitionism.

In the second period, childhood to puberty, inhibitions are gradually brought to play upon the child. By shaming him, his elders teach him not to expose his body, and he is brought into contact with the social aspects of the sex problem—he is taught social conventions and taboos. But the child's mind is free to regard sexual themes, especially those regarding birth. It is folly for us to think he is indifferent—he builds up ideas, often quite rational, because of his observations in nature study. Consequently the hypocrisy of the stork story is readily sensed, and if it were not for prudery, based on senseless sex taboos, the child's spirit of free enquiry would bring to him the personal instruction so natural and so necessary, and there is no one so well prepared for this as the well instructed parent who intimately knows and understands his or her child.

It is to give to parents a true prospective in this all-important matter that the film "How Life Begins" is sponsored by the Social Hygiene Council. It describes the growth and development of plant and animal life and shows the relation of these facts to human life.

Three contributions to the Theory of Sex—Freud. Man's unconscious Conflict—Wilfred Lay.

Life Problems of Social Hygiene

By Frances E. Brown,

Supervisor, Venereal Disease Nursing, Department of Public Health, Toronto.

SOCIAL Hygiene in its broadest sense is concerned with all aspects of social health, but the usage of the word on this continent has limited the term to those social health problems which directly or indirectly have grown out of the sex instinct. The four lines of attack on the problem of social hygiene in this sense have been generally education, recreation, legal and medical. The social hygiene problems of Great Britain and Canada have been concerned until recently chiefly with one aspect of this subject, the medical aspect, i.e., the treatment of venereal disease.

Venereal disease is a symptom of ill health in our social body, and one does not deal long with this side of the problem before realizing that the cure and prevention of these diseases cannot be accomplished by the provision of medical means alone, but that the medical, legal, educational and recreational side of the question must be considered together, if the disease is to be prevented and medical measures made even reasonably efficient. It was a realization of this fact that led several of the branches of the Canadian organization dealing with this problem to recently change their name from the Council for Combating Venereal Diseases, to Social Hygiene Council.

The facts concerning the prevalence of the venereal diseases in our midst, as revealed chiefly through the examination of army recruits, came as a startling surprise to our people. The popular education carried on during the war regarding the serious nature of these diseases and their consequences, not only to the individual but to the nation itself, was sufficient to change the attitude of the public toward this question. The cure and prevention of these diseases ceased to be an individual matter, and it became a matter of national concern that they be treated and treated until cured or non-infectious, the treatment to be paid for, if necessary, out of public funds. It was this new attitude on the part of the public

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Read before a meeting of the Hamilton Social Hygiene Council, February 23rd, 1922.

that made it possible for the Governments to bring in legislation dealing with the control of venereal disease.

The Venereal Diseases Prevention Act of Ontario which became law July, 1918, was modelled after legislation already existing in New Zealand and Australia, and was the first of its kind in Canada. The other provinces rapidly followed the example of Ontario in this respect, and at the present time all the provinces have legislation dealing with the control of venereal disease, with the exception of Prince Edward Island. The administration of the Acts is in the hands of the local Medical Officer of Health, and wide powers are given him through the various provisions of the Act, in order to prevent the spread of infection from these diseases.

The main provisions of the Ontario Act are as follows: The Medical Officer of Health may order the examination of persons under arrest or in custody, or of others, upon receipt of credible information, whom he may reasonably suspect of being infected with venereal disease.

If upon examination such persons are found to be diseased the Medical Officer of Health may give such further orders for their detention, isolation, as he may consider necessary to prevent the spread of infection by them. He may also issue orders to such persons prescribing the course of conduct they must follow in order to avoid the exposure of others to infection and in regard to treatment, and may require them to produce a certificate from time to time, stating that they are under treatment. The Medical Officer of Health may require hospitals receiving public grants to make provision for the treatment of these diseases. Suitable penalties are provided for breaches of the Act or of orders lawfully given under the Act.

In Toronto where the Act has been rather consistently enforced since it became law, the following results have been obtained: During the last year, January 1st, 1921, to December 31st, 1921, 1,126 persons were dealt with by the Department of Public Health under the various provisions of the Act. Of 244 persons ordered examined 121 were found to be diseased. These were persons referred to the Medical Officer of Health from various sources as the contacts or sources of infection of other diseased individuals. Many of them were not aware they were diseased, and few of them had ever been under treatment; 368 persons were placed under treatment. These were persons who upon examination were found to be diseased, and of others reported by private physicians and clinics because they refused treatment. During the same period, of the persons examined while in custody, 175 were found to be diseased, a certain number of these were detained for varying periods of time after their term of sentence had expired because of the infectious nature of their disease or their mode of living made them a menace to public health.

The source of the new cases reported during last year is interesting, and is as follows:

Courts	218
Clinics	204
Military	151
Jail	144
Individuals	51
Police	34
Public Health Nurses	25
Other Boards of Health	20
Private doctor	19
Mercer Reformatory	10
Other Reformatories	2
Social Agencies	2
Good Shepherd	1
Total	881

You will see that the larger number of these cases were reported by the courts. This number is made up of persons who have appeared in court charged usually with sex offences, and as revealed by the evidence given, have been exposed to venereal disease. Of these 218 persons, 86 men and 134 women, 124 or 57% were found to be diseased. From a public health point of view this source of case is a most important one, because these are the persons who because of their conduct are the most prolific sources of infection. By means of the Venereal Disease Prevention Act much has been accomplished in the interests of public health. Many cases of these diseases have been discovered and placed under treatment and treated during the most infectious period of the disease. That the principle behind the Act is sound and has the backing of public opinion is proved by the fact that in Toronto at least the health authorities have never failed to secure the support of the courts, before which they have brought these cases.

In the Legislature of 1920, the Dominion Government granted $200,000.00 for the work of venereal disease control. This sum was to be divided among the provinces on a per capita basis and granted on condition that the provincial governments furnish an equal amount and fulfill certain requirements laid down by the Dominion Government. Up to date the provinces, with the exception of Prince Edward Island, have accepted the grant and are carrying on work with venereal diseases. Ontario has had for two year $114,000.00 to do this work. This money is administered by the Provincial Board of Health, Division of Venereal Diseases, and the activities of this Division include the establishment of free clinics, the examination and treatment of persons in penal institutions, the manufacture and distribution of the drug used in the treatment of syphilis, and a campaign of education. Thirteen clinics have been established in eight cities as follows: Ottawa, Brantford, Hamilton, Toronto, Windsor, London, Fort William and Owen Sound.

During the year, January 1st, 1921, to December 31st, 1921, 40,707 treatments were given in these clinics. During the same period 21,564 treatments were given in penal institutions. The clinics accomplish a very valuable public health service, not only in preventing the spread of venereal disease through the provision of free treatment for all, but more especially by locating and bringing under treatment other diseased persons, the contacts and sources of infection of patients under treatment.

You are familiar, I am sure, with the work of the volunteer organization dealing with this problem. The Canadian National Council for Combating Venereal Disease, which was modelled after the British society of the same name, was organized in 1919, and now has branches in many of the larger cities. Valuable work has been done, chiefly along educational lines. In Canada, then, and especially in Ontario, we are well equipped to deal with the disease end of the social hygiene problem. We have splendid clinics well equipped and staffed and paid for out of public funds. Some of the best medical men of the country have given and are continuing to give freely of their time and thought in the treatment and study of these diseases. We have a good law well supported by public opinion to deal with refractory and dangerous individuals. We have a well organized volunteer society carrying on constantly a campaign of education. It would seem then that a few more years and venereal disease would be a thing of the past, that gonorrhoea and syphilis would disappear from our fair Canada, never to show their ugly faces here again. And yet—we who are working with the problem know that this is not true, and at times we are overcome with an almost overwhelming sense of failure, for we realize that although we may with infinite work and patience succeed in curing a few of these diseased individuals, our clinics will always have new recruits, and that the hope of the cured patient remaining cured depends upon his or her conduct, over which we have no control. During the year, January 1st, 1921, to December 31st, 1921, 636 new untreated cases of syphilis were admitted to the venereal disease clinics in Toronto. At a morning clinic held lately at one of our hospitals, ten young men applied for treatment for gonorrhoea, contracted recently on the streets of our own city of Toronto. I suppose Toronto is not very different in this respect from other Canadian cities of the same size.

These young people expose themselves to diseases for which in some cases there is no hope of cure and whose consequences reach through them to their children and their children's children with as little or less thought than they would expose themselves to a case of measles. What is the source of this never-ending supply of diseased persons. We might as well face the facts as they are. It is true that the patients coming to our attention include those who are diseased through no fault of their own, the occasional person who has been infected in the course of his or her work, and the innocent wife and the baby infected before it was born, but in the background of each of these cases is seen the sinister figure of the prostitute (male or female) who is the original cause of it all.

Whatever may be our attitude toward the moral side of this question, the physical facts remain the same. Venereal diseases are the result of sexual promiscuity, not as the punishment for breaking a moral law, but because the proper condition of warmth and moisture necessary to the life and growth of the spirochaete and the gonococcus are obtained in the mucous membrane of the human genitals, and it is this fact which makes prostitution the greatest source of infection from venereal disease.

How, then, shall we rid our communities of prostitution and other conditions which lead to the spread of venereal disease, and by whom shall this be done?

In the case of the other communicable diseases, the interest of health authorities is in the source of the disease rather than in the disease itself. In typhoid fever, for example, medical and nursing care is provided for the sick patient, but the real concern of health authorities is to find and destroy the milk or water or oysters, which contain the typhoid bacilli, so that others may not be ill.

In the matter of venereal disease, however, the sources are not so easily dealt with. They go deeply into the make-up of our society and the individual himself, and it will need the combined help of all the best elements of the community to deal with and remove them. It is for your help in this direction that I appeal to-day.

The patients attending any of the clinics for the treatment of venereal disease may be divided into two classes. There is the patient who has become infected innocently or otherwise, but realizing the serious nature of the disease and the necessity for treatment is glad to avail himself of the treatment provided and will obey implicity the orders of the physician in regard to treatment and measures to be taken to avoid the spread of infection from him. These patients give us no trouble and good results in curing the disease are obtained in regard to them.

There is another type of patient on whom treatment is practically wasted. These patients evade treatment if possible. They drift in and out of our clinics, losing themselves in the maze of the city's rooming house district, and reappearing in hospital, court or reformatory. Many of them are promiscuous sexually that a complete cure in their case is impossible. After months of intensive treatment in jail or reformatory, they may be discharged clean, only to reappear a few weeks later reinfected. It is this type of individual who is the chief source of the spread of venereal infection, and it is with this person we must deal and whose mode of living we must alter if we ever hope to reach a solution of the venereal disease problem. In working for any length of time with this class of persons one cannot help coming to certain conclusions in regard to them and the possibility of doing anything to help them. From my own experience I would divide them roughly into three groups, as follows:

1. The old offender.
2. The mental defective.
3. The delinquent.

The hope of doing anything constructive with these persons would depend upon the group to which they belong. The old offender is the man or woman who is well known in the courts and reformatories. Many of them are found to be of normal mentality when examined. Most of them drink to excess, others steal, a few are drug addicts. They are nearly all sexually immoral, not habitually but casually, the women usually in order to buy drugs. Along the way somewhere they have acquired venereal disease, and they drift into our clinics. They have not the necessary stamina to continue treatment until cured, but the treatment received during their frequent terms in jail is usually sufficient to keep the disease in check, and they are not a very serious health problem. It would be difficult to suggest measures for the rehabilitation of individuals of this kind. The trouble, whatever it is, seems to go too deeply into the make up of the individual for human hands to reach, and religion which has done wonderful things in a few of these cases seems to be the only force strong enough to bring about a change of heart and of conduct in persons of this kind. In this class, too, are the older men and women, usually of normal mentality who come into the courts charged with procuring, keepers of bawdy houses, etc. These are the vultures of society, the men and women who live on the earnings of the miserable bodies of their victims. They frequently are not themselves diseased, but they are an important source in the spread of venereal infection, because of the means they provide. I cannot suggest any means of reformation in these cases. Fear is the motive with the strongest appeal probably to this type of person, and I can only suggest that the laws dealing with these types of offenders be enforced in such a way as to make a calling of this kind dangerous and unprofitable.

The feeble minded girl, often the dupe of the last mentioned person, comes to us from the maternity home, jail, and reformatory, and constitutes one of the most difficult problems with which we have to deal. This is the adult with the child mind, who is the prey of her own instincts and of the first person who wishes to do her harm. This is the girl who, beginning a misfit in school, continues to be a misfit at work and in her home, dragging her wretched way through life, leaving a trail of defective children and disease behind her. No amount of skilled medical and social work would help in cases of this kind. Fear has no appeal and punishment is cruelty. If proper care and protection cannot be provided for these unfortunates, the only thing to do for the safety of the public as well as the individual herself is to deprive her of the liberty she does not know how to use.

The third group is made up of individuals who need much more study than has ever been given them. In this group the women are nearly always young, some of them pitifully so—14, 15 and 16 years. Most of them have a history of sexual immorality, some of recent occurrence, some of long standing. In the course of time they come to us through the courts, or if diseased reach our clinics. In some of the cases it is quite easy to find the origin of their delinquency. The lack of good home influences, including discord between parents, the loss of one or both parents, lack of parental control, lack of sympathy between parent and child, we find are the most important among the causes of delinquency in this type of girl.

There are other factors in the social life outside the home which contribute their share in causing delinquency. These include lack of industrial training with resultant low wages and monotonous work, lack of proper housing accommodation, and lack of proper friends and recreation. Included in this group also are girls and women whose deviation from the conduct accepted as normal by society cannot be accounted for by conditions in their home or social environment. They are the persons of normal mentality coming from homes where all the influences are conducive to right living and yet they seem to deliberately prefer to do wrong. The solution of the problems connected with the classes of persons mentioned depends, of course, upon finding and removing the cause of delinquency. In the case of the girl who has gone wrong because of bad influences in the home, it may be necessary to remove her temporarily from her home, if any good is to be accomplished for her. Homes we know ought to be the best places, and mothers the best people in the world, but as a matter of fact, we know this is not always true, and we must act accordingly. For the girl without a home we must try and provide a substitute, remembering that a home must be more than a house, and it must included some provision for fun. Every young person needs and will have a little play, and if wholesome recreation is not provided, they will take what they can get. It is my own personal opinion, and I believe our records will show, that this is true, that the beginning in a great many cases of the girl who has "gone wrong" was due not to innate perversity or a desire to earn money, but to a desire to escape from the drabness of life and to get a little bit of the joy of life in the shape of a car ride or a dance or a movie—a little bit of fun which their own hard life had denied them.

Most of the girls we deal with are able to do only the most unskilled work. One is constantly surprised at their inability to use their hands or their head. In all their lives they have never learned to do one thing well. In times of industrial depression they are the first to be turned off, and they are thrown out to make their living as best they may. I believe that in some of these cases a training in some manual occupation might solve the problem as far as they are concerned. In the joy of creating something they might forget themselves and their past and take a new hold on life.

I am reminded of Sadie, who came out of jail recently. Sadie is a frail little body of 42, who has spent most of her working life cleaning offices and working in laundries. She seems, however, to have an artistic side as she does some really fine crocheting. During one of the many times she was at the Jail Farm for being drunk, she was given a knitting machine and taught to use it in knitting socks. After she was released she came into the office one day and told us her plans. She was trying to save enough money to buy a machine to work with at home. She told us with great glee of her new accomplishment, "I've learned to make socks on a machine. I can toe off and all."

In the case of the girl whose delinquency cannot be explained through causes in her home and social environment, we shall have to look into the mental and physical make up of the girl herself for the probable cause. In the future we may require finer mental and physical tests in these cases. At present the only certificate we require is that in regard to the examination for venereal disease. We were told recently by a well known child welfare expert of a young lad of good family who was the despair of Big Brothers and probation officers because of his frequent appearances in court. The mental and physical tests made in his case showed him to be normal and still he continued to be unruly. Finally further examination by means of the X ray showed that he had an impacted tooth. The tooth was removed, and he became a child of model behaviour.

We are hearing a great deal lately about those little organs we did not know we had until recently, the ductless glands. An important function of these glands is the secreting of substances which are given off into the blood stream. The scientists tell us that upon the proper secreting of these glands depends not only our physical and mental health, but also our behaviour as well, especially our behaviour in regard to matters of sex. Dr. Blair Bell in his book "The Sex Problem" says "It may be said then that the normal psychology of every woman is dependent upon the state of her internal secretions and that unless driven by force of circumstances, economic and social, she will have no inherent wish to leave her normal sphere of action." This is a new field of study, but it may be a clue worth following in the attempt to find a solution for these seemingly insolvable cases.

I have told you of the problems that arise in connection with our work with venereal disease and endeavored to give you some idea of the type of persons who constitute our problem, and I have suggested certain possible solutions of the problems as I see it. Any attempt to effect a solution of the problems mentioned would necessitate the establishment of certain facilities which do not at present exist, and would involve changes in the organization and methods of public bodies now dealing with these cases.

We are hearing a good deal these days of the need for court reform. We shall need many changes, especially in our police courts if we are to deal at all intelligently and adequately with the sex delinquent.

One of the best, I suppose, of the courts of this kind on this continent is that of New York City, presided over by Judge Jean Norris. In this court the proceedure in regard to women convicted of sex offences is as follows:—The law requires in these cases that following conviction sentence be deferred for three days. During this time, while the woman is detained in a detention home, physical and mental examinations are made and a complete investigation is made of the home and social conditions of the convicted person. When the woman comes up for sentence, the magistrate has before her the result of the physical and mental tests, the report of the social investigation and a record of previous convictions, if any. Upon this she bases her decision as to sentence. If the woman is an old offender or a clearly incorrigible she is given an appropriate jail or reformatory sentence. If she is a beginner and there seems a chance of helping her, she is sent to one of the homes or put on probation. If her mental condition makes custodial care necessary, this is arranged, and if diseased, she is sent to a special hospital.

In our courts, as far as my own experience goes, there is no machinery which would make such a classification of cases possible. The only medical examination is that for venereal diseases, required by the Department of Public Health. In these cases permanent records are not kept or at least are not available, and an old offender becomes a "first time up" simply by stating that she has never been there before. Under these circumstances then the chances of these cases receiving sentences appropriate to the responsibility of the individual are exceedingly small, and the chances of doing anything in the way of prevention and rehabilitation are practically nil.

If preventive and curative work is to be done with this type of delinquent, we must also have certain changes in our penal institutions. There should be some classification of the institution, according to the type of person admitted, or if this is not possible, there should be more effort to classify and separate the inmates within the institution, according to the degree of criminal experience, otherwise these reformatories cease to reform and become veritable schools of crime. Institutions of this kind ought to be more than merely places of detention. Might not the time spent by these persons in institution be used to advantage in teaching them some trade or occupation by means of which they would be able to earn a living at their discharge.

Prolonged residence in an institution tends to weaken the will of the individual concerned and make him an easy prey to the temptations that await him in the world outside. It would seem, therefore, that parole should be made use of in these cases whenever possible.

I have not made an extensive study of the laws relating to sex offences as contained in the Criminal Code, but my own impression in this matter is that it is not so much new laws that we need to deal adequately with the sex offender as a reform in the method of enforcing the laws that we have. I am not attempting to criticize those whose duty it is to enforce these laws, they are usually only voicing public opinion on the matter, and in my judgment public opinion—that is, the best public opinion has a great responsibility in this direction.

Take for example, the case of keepers of bawdy houses. For a conviction on this charge the law provides a fine of $200.00 or six months imprisonment, or both. It rests with the magistrate whether he shall impose a fine or imprisonment, or both. As a matter of fact we know that a fine in these cases, even the maximum fine, is usually paid without much difficulty, and is no deterrent to commencing all over again. If then the public believe that common bawdy houses constitute a menace to public health and morals, they should see to it that the penalties imposed in these cases are such as to make the occupation a dangerous and unprofitable one.

In cities and larger towns where problems of the kind I have told you about arise constantly and in larger numbers, there is a great need of a body especially organized to deal with this type of person. In any city there are always enough social welfare organizations, church societies and others who are interested in the problem and would be willing to help. There is no organization, however, whose particular duty it is to look after cases of this kind, consequently sometimes when we need help most for these persons, we are unable to get it. The society I have in mind should be a voluntary one. Call it Women's Protective League or what you will, but give it a name that will not stigmatize those who apply to it for help. There should be a paid secretary whose duty it would be to organize all the resources of the community to aid those who should be referred to her. To this society we could hand over our problem cases from clinic, court and jail, for study and for disposition. There ought to be in connection with this society a shelter or hostel where girls and women could be housed for a few days pending examination or waiting to obtain work. It seems to me that the establishment of a society such as I have mentioned would be a most important and tangible piece of work, which might be undertaken by any of the local branches of the Social Hygiene Council.

I have spoken of the lack of rooming house accommodation as being a factor in the social hygiene problem. The housing situation, which is unusually acute just now in most of our cities, becomes serious when it concerns young men and women with small income, living in a big city away from home. It seems to me that the construction of a club or hotel where young women might live on a self supporting basis would bring the best possible return in social health for the money invested. Why should this not be undertaken more generally by our philanthropists?

A home is not home without friends, and there are hundreds of young people in our cities to-day hungry and cold, not because of the lack of food and clothing, but for the lack of friendship and the warmth of good cheer. It has seemed to me that the churches have a certain responsibility in this connection. If each church could make a canvas of its neighbourhood and get in touch with the young people without homes and without friends, offering them friends and a chance of wholesome recreation, it seems to me they would be doing more to prevent the problems that we deal with than anything else I know of.

You may object that in dealing with the problem of sex delinquency and resultant venereal disease that I have emphasized too much the part played by women. I am quite aware that sex delinquency in a woman means that some man has also broken a moral law, and that men and women are equally responsible for the spread of venereal disease. I realize that the double standard of morality is largely responsible for conditions of the past that somewhere or other we must seek to change the attitude of the public toward the question, if we are going to accomplish any results.

I have told you in a general way of the causes behind the problems which come to our attention. It is important that we realize that in dealing with these problems we are dealing with manifestations of the sex instinct. This instinct which is the most fundamental one in the human organism seeks satisfaction and expressions which are at times at variance with our social institutions. The instinct is as old as the race and the institutions of comparatively recent origin. We have in this country accepted the monogomous family institution as the institution which safeguards to a maximum degree the interests of childhood, of motherhood, and of society at large. Let us seek to uphold this ideal by example and precept.

PLAN NOW

National—all Canada.
Public—all of us.
Health—best of all.

Can you afford to miss it?
Obey that impulse and go.
No one should be absent.
Voluntary workers should all be there.
Every day interesting and instructive.
New ideas will be presented.
Think it over.
Interest always will be maintained.
Only the dead ones will be absent.
Neglect all other engagements.

June 6-7-8-9, 1922. St. John, N.B.

Sex Education

(Continued from previous issue.)

Four Aims of Sex-Education.—In attempting to lay the basis for the best possible adjustment of sex and life, there are four tasks or chief aims of the larger sex-education:

(1) Sex-education should aim to develop an open-minded, serious, scientific, and respectful attitude towards all problems of human life which relate to sex.

(2) Sex-education should aim to give that knowledge of personal hygiene of the sexual organs which is of direct value in making for the most healthful and efficient life of the individual.

(3) Sex-education should aim to develop personal responsibility regarding the social, ethical, psychical, and eugenic aspects of sex as affecting the individual life in its relation to other individuals of the present and future generations—in short, sex-education should consider the problems of sexual instincts and actions in relation to society.

(4) Sex-education should aim to teach very briefly to young people, during later adolescence, the essential hygienic, social, and eugenic facts regarding the destructive venereal diseases whose widespread distribution is chargeable to sexual promiscuity or immorality.

Sex-Education Through Other Subjects or Courses.—Since sex-education is but a phase of character education as a whole, most instruction and guidance intended for the building up of wholesome attitudes and ideals regarding sex should be developed as integral parts of the general education program. The facts of life which directly or indirectly concern sex should not be taken from their normal setting and organized into separate courses of study known as "social hygiene" or "sex-education." On the contrary, the subject matter and regular courses in biological and social sciences, physical education and hygiene, household arts or home-making, general literature, and psychology offer many natural situations for dealing with fundamental sex facts and problems. Advantage should be taken of such opportunities for teaching relating to the field of sex-education. Such inclusion of reference to sex in various courses sometimes tends toward duplication and disproportionate emphasis, and therefore in each school or college there should be some co-ordinating individual or committee.

The experience of colleges and normal schools in which there are departments of hygiene organized in harmony with the principles enunciated by the Interdepartmental Social Hygiene Board indicates that in the higher institutions, at least, such departments of hygiene are the logical co-ordinating agencies.

Co-operation of Parents.—The success of the movement for sex-education of children of school ages will depend largely upon the attitude and co-operation of parents; and hence it is important that parents should be led to understand the reasons and plans for sex-education. Many parents can easily be instructed so as to be competent to protect their children before the school age against physical or moral injury. From the beginning of school age to adolescence the problem of sex-education is one for parent and teacher. From the beginning of adolescence on, it will always be a problem of organized education, for the majority of parents will never know enough natural and social science to meet the problems of adolescence. It is a mistake to assume that sex-education is a problem for parents only; and that it is a temporary problem of the school until parents assume the responsibility.

It is important, especially in junior and senior high schools and in the early years of colleges, that parents should co-operate with educational officials in guiding or controlling young people in many aspects of social life which carry the possibility of serious danger and demand the sympathetic co-operation of older people.

Social-Hygiene Problems.—There are eight important sex problems of our times that offer reasons or arguments for sex-education of young people because mistakes in many lives are chiefly traceable to ignorance and lack of guidance: (1) Personal sexual health; (2) Sexual vulgarity; (3) Sexual morality; (4) Eugenics or individual responsibility for racial improvement; (5) The problems of marriage; (6) Illegitimacy; (7) The social evil; (8) The venereal or social diseases. See discussion of these problems in Chapter 11 in Bigelow's "Sex-Education."

Personal Sex-health.—With regard to personal sex health, a limited amount of protective guidance during preadolescent years should be part of general instruction regarding health. In preparation for adolescence, general information regarding menstruation and its hygiene should be given to girls and to boys should be given some protective warning regarding the normal nature of their own developing functions. At maturity men and women should know the principles of personal hygiene which relate to marriage.

Wholesome Attitude.—The importance of aesthetic or at least anti-vulgar attitude regarding sex can not be overstressed. If sex-education succeeds in giving young people a clean and wholesome attitude, there will be little difficulty in solving most of the social and hygienic problems of sex. Hence, successful sex-education depends very much upon the attitude formed in the minds of young people and towards this the major efforts of parents and teachers should be directed. Sex-education must work for a purified and dignified attitude which sees vulgarity and impurity only when the functions of sex have been voluntarily and knowingly misused and thereby debased. Sex-education in home and school must work against the idea that sexual processes are inherently vulgar, degraded, base, and impure.

Human Meanings of Sex.—It is only by frankly recognizing and developing the psychical and social aesthetic meanings of sex that are distinctly human and superadded to the merely propagative function of the animal, that people can be led far away from the almost universal secrecy, disrespect, vulgarity, and irreverence concerning every aspect of sex in human life. Sex-instincts and processes are essentially pure and beautiful phases of that wonderful something we call "life." Sex-education should aim to give this aesthetic attitude by presenting life as fundamentally free from the degradation arising from the common misuse and misunderstanding of the sexual nature.

Morality or ethics of sexual morality means the limitation of sexual union to monogamic marriage, but there is need of super-morality or sex idealism which means an all-satisfying monogamic affection and comradeship based on certain physiological, psychical, aesthetic, and ethical laws that underlie human sexual potentialities.

Immorality in sexual lines should not be overstressed when teaching young people. Rather should there be emphasis on the moral, the normal, the healthful, the helpful, and the aesthetic aspects of the sexual processes in human life. Extensive knowledge of vice is not helpful to any individual.

To be continued.

Social Background

Congestion and Its Social Effects

Is there a slum area in the city of Toronto? If by "slum" one means a condition such as is found in the tenement district of New York, or in the congested areas of some of the larger European cities, the answer to the question is probably in the negative. But, if by "slum" one understands housing conditions that interfere with the normal progress of citizens physically, mentally and morally; that deny to children fresh air, exercise and abundant recreation; that rob them of the healthy growth of the imagination; and, above all, deny to both children and parents a wholesome home relationship, then by no means can we feel assured that the statement, "Toronto has no slums" is a correct one.

CAUSES OF PRESENT HOUSING CONDITIONS.

Toronto is a city that has grown rapidly. Population and commercial interests have developed out of all proportion to the increase in dwellings. Housing conditions in the downtown sections illustrate how the commercial house and factory have encroached upon the territory formerly occupied by the family residence.

Very little house building has been carried on in Toronto since 1914. During the years of the war labour power was used in every conceivable capacity to win the war. At the same time, building materials of all kinds soared in price till the building of dwellings at a reasonable rental or sale price became prohibitive. The last two years have been years of depression and doubt. Money has been so tight that the small contractor, who depended entirely on credit received, has been unable to compete in the business. The result is that houses condemned by the Medical Department of Health as unsuitable for habitation have been forced to be used, as people had nowhere else to go. Lastly, the economic factor plays a most important part. Many people live in the "slums" who are not of the "slums," because the rental and sale price of the better type of house cannot be met out of the weekly earnings.

TWO TYPES OF POOR HOUSING.

There is the small type of house, usually consisting of four to five rooms, the fifth generally a lean-to kitchen. Rooms—so called because they are enclosed by four walls, kept erect by the many thicknesses of wall paper, yet in the majority of cases, were the partitions removed, they would constitute one fair-sized room. A large number of these premises have houses in the rear, in addition to those on the street line. The space between is occupied with small buildings—outhouses, chicken coops, stables, etc. Personal and household effects are scattered about, intermingled with cart wheels, clothes lines, broken machinery, tar paper, dead fowl, vegetable refuse, and ashes. This constitutes the playground for the children of these houses; the articles and refuse lying about are their toys; the outhouse and stables their hiding places. Does not this lack of privacy, lack of garden space, lack of play room offer a serious menace to the development of the individual and the family in these quarters?

The conditions are not made more attractive by the fact that one water faucet serves the needs of four houses. Being out of doors it is easily frozen over during the winter. To prevent this, the people often keep their taps open during the cold season, so that the yard becomes one coat of ice. As soon as the warmer weather sets in, thawing takes place, and the yard takes on a new appearance. If it was unattractive during the winter months, it becomes more so as the spring advances, for the place is a pool of ooze slowly wending its ways to the cellars of the rear houses or finding a course in streaks across the kitchen floor. No wonder one poor old body exclaimed: "Since I came to this house, I cough and cough all the time.'

From a medical point of view this type of house is a serious menace to the community. From a moral point of view it is a little better than the house built originally for one family of comfortable circumstances, now sheltering as many as thirty-three persons of different families. One example will serve to illustrate this point:

A house of thirteen rooms with one bathroom, is occupied by eight families. The basement has been divided into two rooms, one of which has a toilet. These rooms are the home of a widower with five children, two of school age and three over school age. A widow with two children resides in a room on the ground floor. It is the only room on that floor with running water, consequently it is the rendezvous for all the other people on the ground floor.

The low resistance against communicable diseases of the families in this house is particularly noticeable. It is a rare occurrence to visit there and find the house free from diphtheria, scarlet fever, measles or mumps.

The urgency of the housing problem is not half appreciated. Bad houses are destructive of human life. They rob people of their physical health; they deny them the right to fresh air, beauty and decency. "Prevention is better than cure." Much of our juvenile delinquency, our ill health, our moral laxity could be prevented if our housing conditions were improved.

News Notes

An excellent conference on Tuberculosis was staged in Ottawa on March 14th, 15th and 16th jointly by the Department of Soldiers' Civil Re-Establishment and the Canadian Association for the Prevention of Tuberculosis. The following is a list of subjects discussed: Diagnosis of Pulmonary Tuberculosis; Differential Diagnosis; Standardization of Minimal Requirements; Classification of Pulmonary Tuberculosis; Treatment; Sanatorium Administration; After-Care; Pensions; Miscellaneous. Among those present were: Dr. C. D. Parfitt, Gravenhurst; Dr. J. R. Byers, Ste. Agathe; Dr. A. H. Baker, Calgary; Dr. D. A. Stewart, Ninette, Man.; Dr. D. A. Carmichael, River Glade, N.B.; Dr. H. B. Logie, Edmonton; Dr. J. H. Elliott, Toronto; Dr. J. H. Holbrook, Hamilton; Dr. W. Wilson, Vancouver; Dr. J. S. Pritchard, Battle Creek, Michigan, U.S.A.; Dr. A. H. W. Caulfield, Toronto; Dr. R. D. Hewitt, Toronto; Dr. F. H. Pratton; Dr. A. T. Bond, Ottawa; Dr. H. A. Rawlings, Ottawa; Dr. J. R. Ritchie, Regina; Dr. G. C. Brink, Hamilton; Dr. A. F. Miller, Kentville, N.S.; Dr. H. A. Farris, St. John, N.B.; Dr. W. D. Kendall, Gravenhurst; Dr. B. H. Hopkins, Kingston; Dr. R. G. Ferguson, Fort Qu'Appelle; Dr. F. M. Wells, and Dr. E. W. Archibald, Montreal; Dr. R. I. Harris, Toronto; Dr. A. F. Macauley, Ottawa; Dr. R. S. Stevens, and Dr. W. M. Hart, Ottawa; Colonel E. G. Davis and Dr. J. F. McQuay, members of the Board of Pension Commissioners, Ottawa; Mr. N. F. Parkinson, Deputy Minister, and Major E. Flexman, D.S.O., Director of Administration, Department of Soldiers' Civil Re-Establishment.

The Canadian National Council for Combating Venereal Diseases has organized a Business Management Committee. This committee will have general supervision of the business affairs of the Council. While the personnel of the committee is not yet complete it is hoped that eventually it will include outstanding business men in each province in Canada. To date the following have consented to act: J. E. McConnell, Esq., Major Gordon Ingram, London; Judge J. D. Gauld, Dr. J. Heurner Mullin, Hamilton; E. R. Wood, Esq., Hon. Mr. Justice W. R. Riddell, Colonel Albert Gooderham, L. M. Wood, Esq., Dr. Gordon Bates, Dr. Andrew S. Grant, J. J. Gibbons, Esq., R. P. Gough, Esq., J. H. Gundy, Esq., Hon.

P. C. Larkin, W. G. Patrick, Esq., Hon. N. W. Rowell, Toronto; A. A. Crawley, Esq., Ainslie Greene, Esq., Colonel J. W. Woods, Ottawa; Sir Arthur Currie, E. W. Beatty, Esq., Dr. A. H. Desloges, Montreal; Hon. Dr. W. F. Roberts, St. John, N.B.; Hon. E. H. Armstrong, Halifax; W. L. Ormond, Esq., Amherst, N. S.; F. W. Marsh, Esq., Vancouver, B. C.

The third Congress of the International Union against Tuberculosis will be held in Brussels the 11th, 12th, 13th, of July, 1922. Papers and discussion will develop along three principal lines. 1. Prophylaxis of Tuberculosis among children: (a) Pre-School age; (b) School age. 2. Prophylaxis Anti-Tuberculosis Work in the homes by visiting nurses. 3. Suitable employment for the tuberculous patient, and the arrested case.

Visits will be made to the different centres throughout Belgium, especially interesting for their tuberculosis achievement.

Canadians who may be in Europe at this time, and who might be inclined to contribute papers on different phases of Tuberculosis work will be allowed thirty minutes for the reading of their papers. The secretary for the Congress stipulates that the complete paper will be in the hands of the Secretary of the Canadian Association for the prevention of Tuberculosis, Bank Street Chambers, Ottawa, not later than May 1st, to be forwarded by that Office to the Secretary of the Conference.

Hon. P. C. Larkin, High Commissioner for Canada, will represent the Canadian National Council for Combating Venereal Diseases on the Central Body of the British National Council for Combating Venereal Diseases.

Dr. Fred W. Routley, of Maple, Ontario, has been appointed Director of the Ontario Division of the Canadian Red Cross Society and is taking over his duties immediately at the office of the division, 410 Sherbourne Street, Toronto.

Dr. Routley graduated in medicine from the University of Toronto in 1907, and has had an extensive general practice at Maple, Ontario, for thirteen years. He is a brother of Dr. T. C. Routley, Organizing Secretary of the Ontario Medical Association.

Dr. Routley has been active in medical circles, having been largely instrumental in organizing the York County Medical Society, of which he held the office of President for six years; he has also served on the General Purposes Committee of the Ontario Medical Association. As a Fellow of the Academy of Medicine in Toronto, he has kept in touch with the latest developments in medical science.

Mrs. A. M. Huestis was elected President of the Toronto Social Hygiene Council on March 28th, succeeding Rabbi B. R. Brickner.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF FEBRUARY 1922.

COMPARATIVE STATEMENT.

	1922		1921	
	Cases-	Deaths	Cases-	Deaths
Small-pox	185	0	867	5
Scarlet Fever	610	17	622	15
Diphtheria	403	38	565	59
Measles	554	1	395	8
Whooping Cough	158	4	257	17
Typhoid	31	5	37	10
Tuberculosis	171	117	194	147
Infantile Paralysis	—	—	—	—
Cerebro-Spinal-Meningitis	6	6	12	12
Influenzal Pneumonia	—	41	—	17
Primary Pneumonia	—	289	—	374
	2118	518	2949	664

VENEREAL DISEASES.

REPORTED BY MEDICAL OFFICERS OF HEALTH.

	Feby. 1922 Cases	Feby. 1921 Cases
Syphilis	181	195
Gonorrhoea	138	245
Chancroid	3	12
	322	452

NOTE:—I death from Sleeping Sickness.

SMALL-POX.

County.	Municipality.	Cases
Algoma	Sault Ste. Marie	1
Bruce	Amebel	1
Carleton	Ottawa	14
Essex	Colchester North	1
	Gosfield North	1
	Leamington	15
Frontenac	Kingston	2
Grey	Owen Sound	39
	Hanover	2
	Sydenham	1
	Shallow Lake	8
	Sullivan	2
Kent	Wheatley	1
	Dresden	2
Lanark	Dalhousie, N. S.	2
Lincoln	St. Catharines	1
	Niagara Township	4
Perth	Elma	1
Prescott and Russell	Cumberland	7
	Clarence	4
	L'Original	2
Renfrew	Arnprior	3
Simcoe	Orillia	2
Thunder Bay	Schriber	9
Temiskaming	Kearns	1
Waterloo	Waterloo Township	2
	Kitchener	1
Welland	Welland	3
	Niagara Falls	20
	Humberstone	2
	Port Colborne	1
	Chippawa	5
	Willoughby	3
	Crowland	2
Wentworth	Waterdown	1
York	Toronto	17
	Scarboro	2
		185

Editorial

LEAVING IT TO JOHN.

THE average thinking citizen cannot help being impatient at the slowness with which obviously necessary social reforms and readjustments are accomplished. A grant or a piece of legislation which will mean the lengthening of human life in the community is required. To persuade government authorities of its necessity means an amount of preparation and persuasion which is unbelievable. To interest financial men who still hold the balance of power in order that they may use their power for the great end of humanity vigorously and at once is an achievement which only an imminent and stupendous calamity makes easy.

One is prone to wonder whether our method of governing the country has not something to do with it. True, we elect men to Parliament, to municipal and township councils, supposing that they are good men and true and that the affairs of the country which are our affairs, will be managed efficiently. But then the general "leave it to John" principle comes in and until the next election we pursue the pleasant occupation of chasing dollars while our representative talks and talks and talks, too often only in order that he may be a conspicuous and successful figure in the next election as well as in this.

Too frequently the election itself has been fought on a single comparatively unessential issue. When a legislative body meets subjects which mean the extension of human life and definite improvement in living conditions are side-tracked or only discussed grudgingly. A financial crisis arises. Thousands of men are thrown out of work. Illness increases and the death rate rises. The amount of money in the country is exactly what it was a year ago. Yet our legislators are absolutely unable to cope even with this situation. The money remains in wealthy investors pockets. The wheels of industry stop and conditions are left to right themselves. Meanwhile the increase in illness which is an inevitable result is inadequately dealt with. Indeed, the legislators themselves pay little or no attention to it. And this situation is only one example of the results of a general false point of view.

One cannot but believe that the "leave it to John" principle is at fault. Men should copy the example of women. Let them form a national council of men with representatives from all parts of the Dominion. Form local units which will meet frequently. Let men generally discuss together problems making for the public weal, come to decisions which will be of value because the influence of all will be felt, and then use organized pressure on legislative bodies. Then, and then only, will we achieve speed in the enactment of social legislation and in the utilization of government funds for public health purposes as they are required—not after delay has been the occasion of thousands of deaths in the costly hospitals, sanitoria and insane asylums of the country. One cannot but look forward to the time when national councils of men and national councils of women may together be a tremendous factor in the solution of human problems and the progress of humanity, leaving the policy of "leave it to John" to be remembered only for its futility and absurdity.

Notes on Current Literature

FROM THE HEALTH INFORMATION SERVICE, CANADIAN RED CROSS SOCIETY.

Child Welfare Standards.

An address presented by the Chief of the United States Children's Bureau to the Association for the Prevention of Infant Mortality. ("The Canadian Child," February 1922, P. 12).

Infant Welfare Clinics.

From the medical point of view, infant welfare clinics are of most service in reducing the mortality from malnutrition, summer complaint, dysentery and syphilis. This medical supervision is most effective when combined with careful home visiting and instruction by public health nurses. ("The Journal of the American Medical Association," March 11th, 1922, P. 707).

Scope of Public Health.

An interesting article on the development and scope of organized public health in the United States. ("Public Health," Michigan Dept. of Health, January-February 1922, P. 436).

The Rural School Lunch.

The article includes a table which shows the number of rural schools in the United States which serve hot lunches and the method of supervision employed. ("The Journal of Home Economics," March 1922, P. 128).

The Working Mother.

The effect of motherhood upon work and the effect of industrial employment upon the mother and child. ("Journal of State Medicine," February 1922, P. 60).

Prevention of Respiratory Diseases.

Rules and regulations for the prevention and control of respiratory diseases among school children at Child Welfare stations and in the home. ("School Health News," March 1922, P. 1).

Diphtheria Carriers.

The carrier of diphtheria bacilli from the standpoint of the isolation hospital and the value of the Schick test in separating virulent from harmless carriers. ("The Medical Officer," March 4th, 1922, P. 91).

Unity of Action against Venereal Diseases.

A summary of the conclusions reached by the four recent international conferences on venereal diseases. The resolutions adopted by these conferences agree that early scientific treatment together with the education of the public are the most effective weapons against venereal diseases. ("The World's Health," January 1922, P. 35).

The Public Health Nurse and Venereal Diseases.

The opportunities of the public health nurse in the venereal disease clinic, in follow-up work beyond the clinic and in the education of the community. ("Public Health Nurses' Bulletin," New York State Department of Health, March 1922, P. 17).

Health Play.

"The Quest for the Fountain of Health." A good health play with 30 child actors.

Reports Received.

Report of U. S. Public Health Service for 1921.
Report of Children's Bureau (U.S.A.) for 1921.
Statures of children. United States Children's Bureau Report.
Constitution of Junior section of British Red Cross.

Book Review

"Lessons on Tuberculosis and Consumption," by Charles E. Atkinson, M.D., Funk and Wagnalls Co., Publishers (Price $2.50), 470 pages.

While this volume follows the lines of its numerous predecessors in this field of work, it goes more into detail in many phases. There is new material in regard to artificial light treatment, and the illustrations are striking and interesting, while the index is a serviceable addition to the book.

One of the most valuable chapters is the one upon Fresh Air—its uses and abuses, and the author points out that "Out-door Living" does not necessarily mean "Roughing it," and wisely cautions patients against undue exposure to hardships consequent upon foolish attempts to recover their health by cutting loose from proper supervision and care.

Probably its outstanding feature is the emphasis placed upon the importance of discriminating between patients, and treating individuals as such and not as a group, and in this attitude its author is to be highly commended.

Provisional Programme
Health Congress

St. John, N.B.

Canadian Association for the Prevention of Tuberculosis—President: Sheriff Cook. Secretary: Dr. R. E. Wodehouse, Bank Street Chambers, Ottawa, Ont.

Canadian Public Health Association—President: Hon. Dr. Roberts. Secretary: Dr. McClenahan, 206 Bloor Street West, Toronto, Ont.

Canadian National Council for Combating Venereal Diseases—President: Hon. Mr. Justice Riddell. Secretary: Dr. Gordon Bates, 154 Bay Stret, Toronto, Ont.

June 6th, 7th, 8th, 9th.

Tuesday, June Sixth.

9-11.30 a.m.—Registration.

11.30-12.30 Noon—Moving Pictures—(a) How Life Begins.
(b) Industrial Health Film.

2-4 p.m.—Social and Mental Hygiene Laboratory Sections, C. P. H. A. Canadian National Council for Combating Venereal Diseases. (Joint Meeting.)

(1) Laboratory Paper. Title later.
(2) Social Service follow up with reference to Venereal Diseases—Dr. Gordon Bates.
Discussion—Dr. McClenahan and Social Service Nurse.
(3) Work of Dominion Department of Health in Venereal Diseases—Dr. J. J. Heagerty.
Discussion—Dr. Desloges.
(4) Laboratory paper No. 7—(Title later)—Dr. Harris, Department of Health, Ottawa, Ontario.
Discussion—Dr. Ambramson.
(5) Laboratory paper No. 6—Interpretation of Wassermann Test—Dr. H. K. Detweiler.
Discussion arranged later.

2-4 p.m.—Canadian Association for the Prevention of Tuberculosis and Child Welfare Section of C. P. H. A. (Joint Meeting).
Chairman—Dr. W. J. Bell, Toronto.

(1) Tuberculosis in School Children—Dr. Ferguson.
Discussion—Dr. Miller.
(2) Paper on Child Welfare—Dr. Rowley.
Discussion—Dr. George Smith.
(3) Breast Feeding—Dr. George Smith.
Discussion—Dr. W. J. Bell.
(4) Paper to be announced later—Dr. Pritchard, Battle Creek.
(5) Paper to be announced later—(Voluntary Agencies in Child Welfare—suggested title)— Dr. Young, Vancouver.

8 p.m.—Chairman—Hon Dr. Roberts, St. John.
Speakers—His Worship the Mayor, St. John, N.B.
Hon. The Lieut.-Governor, Mr. Pugsley.
Hon. Dr. Beland, Minister of Health, Canada.
Chairman's Annual Address.

Wednesday, June Seventh.

9.30-12.30—Child Welfare Clinics. (Location announced later.)
Conducted by Dr. George Smith, Toronto.
Dr. W. J. Bell, Toronto.
Dr. Rowley, St. John, N.B.

9.30-12.30—Venereal Disease Clinics. (Location announced later.)
Conducted by Dr. Gordon Bates, Toronto.
Dr. McCarty, St. John, N.B.

9-10 a.m.—Executive Meeting, Canadian Association for Prevention of Tuberculosis.

10-11 a.m.—Executive Meeting, Canadian Public Health Association.

2- 4 p.m.—Open Meeting, Canadian Association for Prevention of Tuberculosis—Chairman: Sheriff Cook or Hon. Dr. Roberts.
(1) Municipal Hospital for Treatment of Tuberculosis—Dr. W. W. Seymour.
Discussion—Dr. Laidlaw, Alberta.
(2) Genito-urinary Tuberculosis—Dr. McKenzie, Montreal.
(3) Simplified Diagnosis of early Tuberculosis—Dr. Bray, Saranac.
Discussion—Dr. Holbrook or Dr. Hart.
(4) Throacoplasty—Dr. W. G. Archibald, Montreal.
Discussion—Dr. Miller.
(5) (Laboratory Side No. 3)—On the Nature of the Substance Responsible for Complement Fixation in Tuberculosis—Dr. R. W. Hodge, Toronto.
Discussion—(Arranged later.)

2-4 p.m.—Open Meeting. Venereal Disease and Laboratory Sections, C. P. H. A. and Canadian National Council for Combating Venereal Diseases—Chairman: Hon. Dr. Roberts or Dr. Desloges.
(1) Laboratory paper No. 1.
Discussion later.
(2) Laboratory paper No. 2.
Discussion later.
(3) Laboratory paper No. 4.
Discussion later.
(4) Laboratroy paper No. 3.
Discussion.
(5) Laboratory paper No. 5.
Discussion.
(6 Venereal Disease Paper—Dr. Fournier.
(7) Venereal Disease Paper—Dr. Ahearn or Dr. Detweiler.

Evening—Free or Dance or Smoker or Concert, if local arrangements can be made.

Thursday, June Eighth.

9.30-12.30—Tuberculosis Clinic. (Site announced later.)
Physicians—Dr. Pritchard, Battle Creek.
Dr. Bray, Saranac.
Dr. Holbrook, Hamilton.

9-10 a.m.—Executive Meeting—Canadian National Council for Combating Venereal Diseases.

10-12 a.m.—Annual Meeting—Canadian National Council for Combating Venereal Diseases.

2-4 p.m.—Child Welfare Section, Canadian Public Health Association—Chairman: Dr. W. J. Bell.
(1) The Public Health Nurse—Miss Meicklejohn, St. John, N.B.
Discussion—Ontario Nurse and Dr. Bell, Winnipeg.

(2) Child Welfare in Canada—Dr. Helen MacMurchy.
Discussion—Dr. Young.
(3) The Practitioner in Child Welfare—Dr. W. J. Bell.
Discussion—Dr. George Smith.
(4) Child Welfare Film.

2-4 p.m.—Venereal Disease and Mental Hygiene Sections, Canadian Public Health Association—Chairman: Dr. Desloges.
(1) Training of Sub-Normal Children—Dr. Bryson, Halifax.
(2) Mental Survey of School Children, Toronto—Dr. C. K. Clarke, Toronto.
(3) Mental Hygiene Surveys—Dr. C. K. Clarke, or Dr. C. M. Hincks.
(Programme of these three papers to be arranged by Dr. Hincks or Dr. Hattie.)
(4) Venereal Disease paper.
(5) The Place of the Sanitary Engineer in Public Health—Mr. F. A. Dallyn, Provincial Board of Health, Toronto.

4..30 p.m.—Reception at Lieutenant-Governor's.
Tea at Golf Club.

8.30 p.m.—Open Meeting—General. Chairman: Hon. Dr. Roberts or Sheriff Cook.
(1) The Role of the Official and Voluntary Health Agency—Dr. Amyot, Deputy Minister of Health.
(2) Tuberculosis in France—Dr. Bernard Wyatt.
(3) Milk Supply—Dr. North, New York.
(4) The Necessity of a Pure Milk Supply—Dr. C. J. O. Hastings.

Friday, June Ninth.

9-11 a.m.—Round Table Discussion on Co-operation of Voluntary Agencies—Chairman: Dr. Roberts.
Representation from:
Dominion Department of Health.
Canadian Association for the Prevention of Tuberculosis.
Canadian National Council for Combating Venereal Diseases.
Canadian National Committee for Mental Hygiene.
The Sections of Canadian Public Health Association.

11 a.m. to 4 p.m.—Boat trip to Partridge Island, lunch on Island.
Visit to quarantine station.

LIST OF HOTELS WITH PRICES.

Royal Hotel—$3.00 per day and up. European plan.
Victoria Hotel—$3.50 per day. American plan.
Dufferin Hotel—$4.00 and $4.50 per day. American plan.
Clifton House—$3.00 per day. American plan.
Sign o' the Lantern—$2.00 per day (rooms) breakfast only.

Make reservations with Dr. Wm. Warwick, District Medical Health Officer, St. John; or at the hotels direct.

The Public Health Journal

Vol. XIII. TORONTO, MAY, 1922 No. 5

Problems of Girlhood and Motherhood

By Dr. Edna Guest.

THE interest that is being taken in the present day vital problems of society goes to prove that our country is growing in wisdom as she is growing in beauty. The student who is interested in national leadership and who has an imagination can see that the country which will lead even three generations from now is the country which is studying seriously all social conditions in this generation. She must first study the history of her country—books on law, its progress and influence—books on religion and on science, and books on society following the progress and influence of social laws and customs.

Then having acquainted herself with the history of her people she must study its product—the great human world of men, women and children of to-day. She must observe frankly the happy and the unhappy—those who have acquired beautiful homes and those who poorly clad and poorly fed, live in miserable sunless rooms. She must look on with unprejudiced eye at the radiantly happy mother who has all this world can give and is the idol and ideal of those holding the Victorian view of woman's place in the world—and at the poor unmarried mother who is the scorn of all but those who pause just long enough to see in her that same ray of love which was seen in the Victorian idol—and which characterized the Madonna of two thousand years ago and hypnotized the world. It is the same immortal ray and those who pause to catch it in the so-called "fallen one" cannot but think.

The country which will lead must think honestly. She must study her people and the laws governing them impartially and fearlessly, and through eyes unbiased by custom. She must see whether the laws of the past will develop her people into the finest

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Read before the Hamilton Social Hygiene Council, February, 1922.

type or whether they will cripple them until their lives may yet become more distorted than the bound feet of the heathen. Then with the background of history and a thorough knowledge of the present she must fix her gaze in the distance on our personified God—look unflinchingly at that same great ideal which Confuscius saw dimly, which the Buddha saw dimly, which Mohammed saw dimly and which Christians have seen dimly—and rubbing any film from her eyes, write with a free and fearless hand the laws which will make for her a people perfect in mind and body—and uncrippled.

Our special interest is in the problems of girlhood and motherhood, and what a fascinating but intricate problem it is. It is absorbing the minds of many of our finest men and women to-day, and they are acting in such a quietly effective way that it is interesting to see the old blockades melt and dissolve away like great mountains of snow in the sunshine. I was very interested when Mrs. Pankhurst told me not long ago that her husband was the original cause of the trouble she gave the dear old world some years ago in the fight for the enfranchisement of women. He was an eminent doctor of law and had been interested in getting certain social reforms through, but was thoroughly baffled in his attempts. Then he conceived a new idea, and that was to equip women to fight these battle so vital to them—and into the heart of his young wife he planted the seed—together they planned, and she started forth, and after his death she carried on and never ceased until she was able to carry the sheaves of the ripened harvest, and lay them as a monument to his memory. Thus man and woman together began one of our most fundamental social reforms, which although lightly said to be "for women," is only "through women" for the world—and thus men and women together are carrying on the great work in an endeavour to make this little world a place where each one of us may do the work for which we are most fitted and be happy—and in the hope that by the construction of this positive social standard all the negatives may silently fade away.

The social problems of girlhood and womanhood confront a sympathetic doctor in a peculiarly direct way. He or she sees, for example, the much talked of declining birth rate, and on the one hand the state crying out for more and more children of our Canadian parents—denouncing with all its might all means of birth control and declaring it to be a murderous means by which the finest type of our civilized race will soon become extinct. And on the other hand the doctor sees the smart young business or professional girl who, picturing marriage as merely the passing through a phantom veil into bliss, has accepted it as such. Suddenly she finds the veil has plunged her into a new job—and a job with such a diversity of duties looming up at her as she had never dreamed of. Quite true, she had felt in an indefinite way that the phantom veil would admit her to woman's noblest profession—the home and motherhood—but she had thought that by some magic it would bestow on her the mastery of this profession. Never had she dreamed that it meant just an ordinary and continuous round of dish-washing and cooking, sweeping and dusting, ironing and sewing—and, too, if she could cook?—but the hours she seemed to work in order to put one dinner on the table, and then in half an hour it was all eaten up and the dishes loomed up at her again. And it was such a relentless treadmill—three meals a day—seven days of the week—fifty-two weeks of the year, so long as she lived! And such a strange job it was, too, with no pay day—the phantom veil was supposed to remove all thought of this from her and substitute for it a leech-like cleavage to one man. She was just beginning to think it was no wonder the marriage ceremony was kept attractive by surrounding it with mystery, when her whole being seemed suddenly to change—it was the dawn of motherhood. Once again her very soul seemed flooded with expectant joy, and she and her husband planned together as joyously as in their courtship days. Babe arrives and while nurse cares for him, with hands trained for her work, their happiness is complete—he is perfect.

But soon, for economic reasons, nurse must leave, and then our little business girl finds herself again faced with a job for which she has had no training—again she has been depending on magic to train her in motherhood, but sadly she learns that the mere birth of a child does not bring with it the skill necessary in caring for it, and a sudden terrible thought comes to her, 'Is she retrograding?' Before her marriage she had a job which required training and skill, and which was well paid—since her marriage she seemed to be messing about at a job which any girl could get with no training, no skill—and no pay? True, she had thought a good deal about motherhood before her marriage, but it was the "Madonna and Child" effect, not the practical side, and as for having any training in it?—well it seemed to be one of the few professions to which young women were still not freely admitted. So, untrained, she struggles with her new profession, and occasionally is found with her head in her arm wondering if it is all worth while. Is marriage just a trap? No—if she could just have her husband and baby, with her former work and her former pay, then she would have all that life can give—but, under the present social and economic conditions this is impossible. So with a strong feeling of injustice somewhere, she goes silently on.

She dreams dreams of a possible happy parenthood for all women, but it would require such a complete reconstruction of all the world's present ideas and ideals that she finds it easier and much more respectable to go quietly on as she is—and, to avoid attacking the economic directly for parenthood's sake; she and her husband decide to pursue the easier course and resort to birth control. Here the zealous statesman steps in, as he cries out for more and more children of our Canadian parents and hotly denounces, for his country's sake, the myriads of families limited to one and two children. But why are they limited? The country which will lead must think honestly, and with a fearless hand write the laws which will make for her a people uncrippled.

Another problem—let us look at the young life of Canada and see whether our men and women are making as great a success of parenthood as they are of other professions. I believe the standard of success should be their ability to bring their children to maturity successfully—healthy minded, healthy bodied, and healthy souled individuals of twenty-two to twenty-four, who, having caught the idea of the world in which they are living, are ready to carry on as a unit of it. We who in our social service work see the side-roads of life crowded with young wobbling pedestrians, while the main road has the few young stalwarts, see also that those on the main road have somehow caught the idea of the putting of first things first, while those on the side-roads have never known, or have lost the idea, that there are these first things. Who are these young things on the side-roads? Some are young girls of fourteen, sixteen, twenty or more, who have lost their way before they were able to judge which was the main road—some are almost hopelessly diseased at sixteen, before they have had a chance at life—others are social outcasts because they have, or will soon, become mothers without the legal or religious rite—many even before they knew how motherhood comes about. As we look at these we cannot but feel a sense of terrible injustice somewhere. Surely these young things are more sinned against than sinning. Then who is responsible? At once we turn reproachfully to the mother—and then we catch our breath and hesitate a moment; for there we see a pale faced little woman whose strength is spent by the diversity of her duties. She is cook. She is housemaid. She is nursemaid and laundress. She is wife and hostess. She is the bearer of children and—trying to be the mother of children all at once—no hired girl could be paid to do the first half of her duties. Then we wonder are women failing in the profession of motherhood? Or is it all economic? Surely successful parents must have time and energy to form ideals for their children—parenthood means far more than supplying their physical needs. It means the study of their individual temperament. It means getting out into the world ahead of them and running up all the by-paths leading from the main road to see what of good or of evil lies there, so that they may deftly guide the young things away from the dangerous paths and allow them the freedom of the safe paths. They must, for example, know of the foul stories heard on the street, and tell their children of these, assuring them that manly little boys and gentle little girls despise such stories and despise the boys who tell them. Later their hearts will swell with pride as they see the strong little character already begun in their children of six or seven as they hurl withering retorts at the large boy, who otherwise might have become a dangerous ideal because of his superior size and worldly wisdom.

Parents must have time to tell innumerable stories to their children so that they may present to them the story of the origin of life in such an intricate and beautiful way that even before the age of nine or ten they will have unconsciously acquired sufficient knowledge to safeguard them. They must have time to cope with the difficult 'teen age boys and girls—to develop the courteous in the boy and a becoming reserve in the girl—to have a knowledge of all that society holds out to the boy and girl of the later 'teens—the beauties and the dangers of the dance—the use and abuse of card games—and of the cigarette craze, particular care even being taken to prepare the girl, before any emergency arises for a quick decision as to whether or not she will smoke. I do not believe smoking is good for women. Some say it is soothing—but it can only be soothing through the stimulation of already over-wrought nerves which should be rested to bring them back to normal. At this age, also, girls should be taught the danger of too great an unreserved intimacy with their boy friends, and vice-versa. A few parents still retain their admiration for the ignorant maiden pictured as Innoence in the Victorian era, but for the most part, our girls remain in ignorance of their danger, from the shrinking on the part of the parents from talking frankly to them.

So many mothers say to me that they know they should tell their girls many things, but that they just seem unable to do so. But if these mothers could witness just one of the tragic scenes which takes place in a doctor's office, they would plunge in boldly and never rest until they had done their best, no matter how imperfectly it might be done. If they could hear just once, the despairing voice of a wrecked one, as she sobs, "Doctor, oh, doctor, it cannot be true!" "Mother! Mother!" she cries to the absent one. "Oh, doctor, why didn't my mother tell me—why didn't she warn me when I was young?—she must have known," and in the torture of her soul she talks on, while her doctor, endeavouring to show her that there yet may be much that is beautiful in life for her, grasps desperately at anything which will retain for the mother her place as an ideal. But when she has gone!—the doctor's head sinks on to her desk as the words still ring in her ears, "Why didn't my mother tell me, doctor—why didn't she warn me?—she must have known." And then she recalls the little pale-faced, tired woman with the diversity of duties, and yet again she recalls the startled thought of the little business girl, 'Was she retrograding?' Before her marriage she had a job which required training and skill, and which was well paid—but since her marriage she seemed to be messing about at a job which any girl could get with no training, no skill—and no pay.

Then, what is the difficulty: is it economic? is it social, or is it educational? Our parents, if they would make a success of their profession, must face its difficulties honestly and endeavour to solve them. The greatest danger to society and our coming generations is that the modern woman is finding the difficulties in other professions so much easier to overcome than those surrounding motherhood that she is quietly avoiding it by non-marriage.

But because they are difficult to solve and because they are surrounded by hundred of years of conventions, we must not be intimidated. We must face our problems and never cease until we have made parenthood so attracive that our statesman will again be crying out about birth control—but this time its maximum limitation—and until we have made parenthood so efficient that the side-roads will all lead safely to the main road and be filled with stalwart young citizens healthy in mind, healthy in body and healthy in soul.

Study of Infant Deaths in Toronto During the Summer of 1921

BY DR. A. GRANT FLEMING.

THE Department of Public Health has for several years made a survey of the deaths occurring amongst infants under one year of age, who died during the four summer months. These surveys have been carried on to discover the cause of these deaths, and with this information as a basis, to take such steps as were indicated to minimize the loss of our young citizens. For whatever we may feel as to the desirability of encouraging immigration, we all agree that the native born is more desirable.

In the year 1921 there were 1,211 deaths of children under one year, and of this number 446 occurred in the four summer months. This indicates that the number of deaths in this age group are about the same in summer as in the other months of the year. In the winter months the deaths in the respiratory group are numerous, and in summer those due to the diarrhoea-enteritis group mount up.

The investigation is made by the public health nurse. From central office a form is sent out, on which to record the information secured. Before the form goes to the nurse, central office enters all known facts, such as date of death, if birth has been previously registered, etc. The public health nurse obtains the rest of the information, securing it in the home and from the family physician, if she has not already a record in her file giving a complete history of the case. She then returns the form to central office where the tabulations are made.

Following is an outline of some of the most interesting facts obtained from the tabulations made for the deaths of this age group during June, July, August, September, 1921. Information was obtained covering 440 out of the 446 deaths. It was not considered advisable to attempt to secure information in six cases.

The first interesting point is the age at death of the 446 cases:—25 per cent. under one week; 10 per cent. one week to one

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Read before Section of State Medicine, Academy of Medicine, Toronto, April, 1922.

month; 17 per cent. one month to three months; 22 per cent. three months to six months; 26 per cent. six months to one year.

The causes of death are as follows:—Acute Communicable Diseases, 16; Tuberculosis, 4; Venereal Diseases, 3; Respiratory, 26; Intestinal, 167; Premature Birth, 76; Congenital, 88; Other Diseases, 67. Total, 446.

Of the 440 tabulated cases, 382 were the children of parents living in Toronto, 58 or 12% were children of non-residents. This latter group of 58 died in hospitals or institutions. As our hospital facilities make Toronto a centre for the care of sick children, it is to be expected that many sick infants will be sent into the City from outside, for hospital care. Our tabulation of deaths in hospital shows that of a total number of 156 deaths in the Hospital for Sick Children, 41 were the children of non-residents of this municipality. This of course keeps the infant death rate of our City higher than it would otherwise be.

Of the 440 deaths, 86 or 20% were the first child. I might here state that a separate study of this group as to cause of death did not reveal anything of interest, except that a higher percentage of deaths occurred in the first month, when compared to the whole group.

Of the 446 deaths, in only 65% were the births registered before the death occurred. Owing to recent commendable activity of the registrar-general, burial permits for infants under one year will not be issued until the birth is registered. The non-registration of births is a serious handicap in infant welfare work.

Last summer an intensive campaign to encourage breast feeding was started, and so of particular interest are the figures in regards to the type of feeding.

In considering these infants as to whether or not they were breast fed, only those that survived the first month were included, as it would be misleading to take into the classification those dying during the first month. There were 269 deaths, excluding the first month. Fifty-four of these 269, or 20%, were breast fed throughout life, 215 or 80% were only partially or not at all breast fed. Of this latter group of 215, there were only 32 cases in which there was an apparently good reason for discontinuing the breast feeding.

We see here that for every breast fed baby that died, four artificially fed ones succumbed; or in other words last summer the breast fed baby had certainly four times better chance of living than his artificially fed brother.

Considering the group of 215 infants artificially fed who survived the first month, we find that 165 had one type of feeding; 41 had two types; 9 had more than two types. This disproves our feeling that many children have a great variety of feedings.

The kind of artificial feeding used is also of interest:—85 had modified milk alone, and 27 had it in combination with other types of feeding. The other common foods used alone or in combination were Eagle Brand Condensed Milk 56, Glaxo 14, Nestle's 12, Mellen's 3, Horlick's 16, Allenbury's 12, St. Charles Evaporated 2, Arrowroot Biscuits 4, Others 9, Not stated 27.

From this it is evident that condensed milk and patent foods are extensively used in feeding.

Considering the age at death with relation to feeding we find that of the 215 partially, or non-breast fed, the breast feeding was usually discontinued in the first, or early in the second month. As an example, of the 24 infants who died when two months old, not one was breast fed for more than one month. Out of the 269 babies surviving the first month were selected 258 reports as having complete information regarding the period over which they were breast fed. From these reports we found that 101 were breast fed for less than one month. This shows so evidently that it is during the first month that breast feeding is so very often discontinued, that it is obvious that it is during this time when the mother must be encouraged to persevere in proper feeding. We have found that many mothers, when first getting up and about and undertaking some work, find the quantity of milk lessened, and if not previously instructed to expect this as a natural event, become alarmed and start to feed the infant with some patent food.

It seemed that a study of infants born in hospital would show the results of a proper start in regards to the continuation of breast feeding. Of 60 infant deaths, among babies born in hospital, 14 were never breast fed for the following reasons:—2 premature; 1 mother died; 1 illegitimate, mother refused; 1 mother had eclampsia; 1 mother had breast condition; 1 baby adopted; 1 put in baby home; 6 unknown.

Of the 46 that were breast fed, 12 only were thus fed throughout life, 17 for one month, 10 for two months or less. In only one case was there sufficient reason given for the discontinuing.

Amongst the infants, whose parents were residents of this municipality, 113 died of intestinal diseases. Of these 17 were breast fed and 96 artificially fed. This indicates that the breast fed baby is much better protected against this preventable condition. Of the 17 breast fed babies who died of intestinal diseases:—Two were over 9 months; 1 had complications of measles; 1 contracted diarrhoea from mother; 1 had spontaneous intestinal haemorrhage; 1 was nine days' old; 11 are unexplained.

It is apparent that while a large percentage of infant deaths are in the first month of life, and due to prenatal and natal conditions, there are still a large number of preventable deaths in the first year of life, and that the solution of this problem lies largely in securing the breast feeding of all infants.

TABLE I.

AGE AT DEATH COMPARED WITH NUMBER OF MONTHS BREAST FED.

(Living 1 month or Over.)

Age at Death	Number	Breast Fed Through Life	Period Breast Fed, in Months. 1 month or less	2	3	4	5	6	7	8	Incomplete Information
1 month	14	7	7								
2 months	40	16	24								
3 "	29	6	13	10							
4 "	44	10	13	10	11						
5 "	24	1	10	5	3	5					
6 "	25	1	7	7	4	0	6				
7 "	21	1	6	5	4	1	1	3			
8 "	10	1	1	3	2				3		
9 "	16	1	8	1	1	1		1		3	
Over 9 "	35	10	12	2	6	3		1		1	
Not included because of incomplete information	11										11
Total	269	54	101	43	31	10	7	5	3	4	11

TABLE II.

TYPE OF ARTIFICIAL FEEDING.

(215 Infants Living One Month or Over.)

Type of Food	One Type	In Combination with One or More Types	Total
Modified Milk	85	27	114
Eagle Brand	33	23	56
Glaxo	6	8	14
Nestle's	3	9	12
Mellen's	1	2	3
Horlick's	4	12	16
Allenbury's	3	9	12
St. Charles' Evap.	1	1	2
Arrowroot	1	3	4
Other	3	6	9
Not stated	25	2	27

165	Children had one type.
41	Children had two types.
9	Children had more than two types.
215	

Some Provincial Vital Statistics

BY INSPECTOR *A. C.* JOST, *Inspector of Health, Department of Public Health, Nova Scotia.*

ONE of the purposes of the study of Vital Statistics is to en- needs, preliminary to the adoption of the proper remedial able the student to determine the Provincial or community or corrective measures. No two Provinces or communities are alike in these respects. No two communities can use to equal advantage any set programme of health measures, for on each presses to an unequal degree various health problems for the solution of which a health organization exists.

Life saving is but one of the functions of a Health Department, a fundamental one it is true, but by no means one to which effort should be directed to the exclusion of all others. The necessity for the expenditure of effort in this direction is measured to a great extent by the mortality rates, and these are consequently regarded as indicative of the need for correction or proof of the efficacy of the effort, as the case may be.

These mortality rates, especially what is known as the General Death Rates, are the resultant of many and different forces. Race composition, age and sex, character of the population, economic status, customs and habits, education, climate, industrial conditions, each and all have an effect in determining this rate, in elevating it above a certain irreducible minimum. Some of these are capable of a certain amount of measurement or correction, which, if comparisons are being made, enable us to judge the relative need for the amount of success obtained.

The comparison of some of the Provincial rates, and the consideration of some of the factors capable of measurement is therefore well worth while.

The most causal examination of the returns of the censuses of the years 1911 and 1916 are sufficient to call attention to the tremendous difference in the numbers of the various age and sex groups of the different Canadian Provinces. This difference, easily discernible in the tables of population as actually enumerated, is more plainly observable in a table in which the numbers are shown under their age and sex grouping in an actual or hypothetical million of each Province's population. For comparison, tables showing the "Standard Million" of the population of England and Wales for the period 1881-90, and actual or hypothetical millions of the population of the Canadian Provinces as determined from the census of 1911 are herewith given.

ENGLAND AND WALES.

Standard Million 1881-90.

Ages.	Male	Female.
1— 4	64,122	64,557
5— 9	59,333	59,673
10—14	54,806	54,765
15—19	49,720	50,287
20—24	42,922	47,564
25—34	71,131	77,499
35—44	55,095	58,944
45—54	40,472	44,478
55—64	27,151	30,893
65—74	15,184	18,326
75 and over	5,591	7,487
Totals	485,527	514,473
		485,527
	Total	1,000,000

PRINCE EDWARD ISLAND.

	Population 1911		(Actual or Hypothetical Million)	
Age Group	Male	Female	Male	Female.
— 4	5,070	4,866	54,124	51,946
5— 9	5,167	4,997	55,159	53,345
10—14	5,462	5,056	58,309	53,974
15—19	5,387	5,194	57,508	55,448
20—24	3,955	4,131	42,221	44,100
25—34	5,655	5,927	60,369	63,272
35—44	4,718	4,755	50,366	50,761
45—54	4,258	4,274	45,456	45,626
55—64	3,584	3,394	38,260	36,232
65—74	2,461	2,560	26,272	27,329
75—				
Totals	47,039	46,635	502,157	497,843
				502,157
				1,000,000

(Those of unknown ages not included in above table.)

NOVA SCOTIA CENSUS OF 1911

	Population 1911		Actual or Hypothetical Million	
Age Group.	Male	Female	Male	Female
Under 5	29,817	28,720	60,691	58,458
5— 9	28,061	27,610	57,117	56,199
10—14	26,271	25,475	53,473	51,853
15—19	25,426	24,697	51,753	50,269
20—24	22,076	21,433	44,934	43,646
25—34	35,483	32,337	72,224	65,824
35—44	28,199	26,005	57,398	52,932
45—54	21,320	20,501	43,396	41,729
55—64	16,201	15,648	32,976	31,851
65—74	11,555	11,353	23,519	23,108
75—	5,960	7,133	12,131	14,519
	250,369	240,922	509,612	490,388
	240,922		490,388	
Totals	491,291		1,000,000	

(Persons of unknown age not included in this table.)

NEW BRUNSWICK.

— 4	22,823	22,170	65,000	53,140
5— 9	20,848	20,399	59,375	58,096
10—14	19,570	18,669	55,735	53,169
15—19	18,818	17,736	53,594	50,512
20—24	15,382	15,553	43,807	44,295
25—34	24,267	23,457	69,112	66,806
35—44	19,437	18,062	55,357	51,441
45—54	15,668	14,580	44,623	41,524
55—64	11,477	10,553	32,686	30,055
65—74	7,410	6,946	21,104	19,782
75—	3,623	3,676	10,318	10,469
Totals	179,323	171,801	510,711	489,289
	171,801			510,711
	351,124			1,000,000

(Ages of persons not given somewhat alter table. No consideration paid to this group in above table.)

QUEBEC.

— 4	145,906	145,160	73,044	72,670
5— 9	128,195	128,640	64,177	64,399
10—14	111,422	110,750	55,780	55,443
15—19	100,554	99,644	50,339	49,884
25—34	145,210	140,535	72,696	70,355
35—44	106,008	100,897	53,070	50,511
45—54	78,395	75,721	39,246	37,908

QUEBEC—*Cont.*

	Population 1911		Actual or Hypothetical Million	
Age Group.	Male	Female	Male	Female
55—64	54,483	52,244	27,275	26,155
65—74	31,192	30,813	15,615	15,426
75—				
Totals	1,006,737	990,783	503,993	496,007
	990,783			503,993
	1,997,520			1,000,000

(Persons of unknown ages not included in above table.)

ONTARIO CENSUS OF 1911.

Under 5	132,937	129,284	52,839	51,387
5— 9	123,165	120,068	48,954	47,724
10—14	118,421	114,597	47,069	45,549
15—19	122,631	116,814	48,742	46,430
20—24	127,710	118,160	50,761	46,965
25—34	221,714	200,300	88,125	79,613
35—44	166,024	154,552	65,990	61,430
45—54	128,104	120,394	50,918	47,853
55—64	81,832	76,992	32,526	30,602
65—74	47,817	47,434	19,006	18,853
75—	23,738	23,220	9,435	9,229
	1,294,093	1,221,815	514,365	485,635
	1,221,815		485,635	
Totals	2,515,908		1,000,000	

(Persons of unknown ages not included in this table.)

MANITOBA.

— 4	31,649	30,923	70,030	68,423
5— 9	25,592	25,137	56,627	55,620
10—14	21,648	21,167	47,900	46,836
15—19	22,117	20,656	48,938	45,705
20—24	28,210	21,239	62,420	46,995
25—34	51,033	35,906	112,920	79,449
35—44	31,211	22,545	69,060	49,885
45—54	19,808	14,524	43,829	32,137
55—64	10,199	7,517	22,567	16,633
65—74	4,335	3,470	9,592	7,678
75—	1,646	1,407	3,642	3,114
Totals	247,448	204,491	547,525	452,475
	204,491			547,525
	451,939			1,000,000

(Persons of unknown ages not included in above table.)

SASKATCHEWAN CENSUS OF 1911.

	Population 1911		Actual or Hypothetical Million	
Age Group.	Male	Female	Male	Female
Under 5	35,977	35,023	73,864	71,905
5— 9	27,389	26,357	56,232	54,113
10—14	21,475	20,675	44,090	42,447
15—19	22,776	17,882	46,761	36,711
20—24	37,990	19,813	77,996	40,678
25—34	69,896	36,098	143,502	74,112
35—44	36,946	21,204	75,853	43,534
45—54	19,927	12,507	40,911	25,678
55—64	10,148	6,529	20,835	13,405
65—74	3,801	2,587	7,804	5,311
75—	1,190	884	2,443	1,815
	287,515	199,559	590,291	409,709
	199,559		409,709	
Totals	487,074		1,000,000	

(Persons of unknown ages not included in this table.)

ALBERTA.

— 4	24,647	23,795	66,697	64,392
5— 9	20,280	19,303	54,880	52,236
10—14	16,618	15,744	44,970	42,605
15—19	17,123	13,868	46,337	37,528
20—24	28,035	14,212	75,866	38,459
25—34	53,570	27,486	144,966	74,380
35—44	30,716	17,531	83,120	47,440
45—54	17,249	10,327	46,677	27,946
55—64	8,077	4,914	21,857	13,298
65—74	2,711	1,891	7,336	5,117
75—				
Totals	219,879	149,657	595,014	404,986
	149,657			595,014
	369,536			1,000,000

(Persons of unknown age not included in above table.)

BRITISH COLUMBIA.

— 4	17,911	17,966	46,115	46,257
5— 9	15,062	14,348	38,780	36,941
10—14	12,989	12,367	33,443	31,841
15—19	15,489	11,778	39,879	30,325
20—24	30,461	13,692	78,427	35,253
25—34	71,272	28,938	183,503	74,506
35—44	45,007	19,772	115,879	50,907
45—54	24,923	11,571	64,169	29,792

BRITISH COLUMBIA—*Cont.*

	Population 1911		Actual or Hypothetical Million	
Age Group.	Male	Female	Male	Female
55—64	10,503	5,731	27,042	14,755
65—74	3,888	2,438	10,010	6,277
75—	1,336	955	3,440	2,459
Totals	248,841	139,556	640,687	359,313
	139,556			640,687
	388,397			1,000,000

(Persons of unknown age not included in above table.)

Bearing these differences in the age and sex composition of the populations of the Provinces in mind, it can be readily understood why a comparison of the crude death rates is of very little value. For a comparison which would permit of a definite pronouncement being made, a method of measuring the effects which a number of causes are having must be devised.

Such a process has been suggested by Newsholme, whose method procures for us a figure, called "the Factor of Correction", which is the measure of the difference in the age and sex grouping as against a certain grouping which is taken as a standard. A convenient standard which may be used for this purpose is to be found in the figures from England and Wales for the period 1881 to 1890, though any standard may be selected, provided there are available in connection with it certain data in sufficiently full detail.

The method applies to the members of the various age and sex groups of the place under consideration the specific death rates of the same age and sex groups of England and Wales. This results in the determination of a certain hypothetical or computed number of deaths being obtained. From this number of computed deaths, the population of the country being known, a computed death rate is obtained, which applied to the crude death of the country taken as the standard, results in the finding of a figure, which thus measures the difference of the effect which the age and sex grouping has on the rate. This figure is called the "factor of correction."

An example of the procedure follows, the population figures being those of the Province of Nova Scotia during the year 1911, divided into age and sex grouping as determined by the census, the death rates being the specific death rates of the same groups in England and Wales during the period 1881-90, and the crude death rates of the same place for the same period.

STANDARD DEATH RATES FOR NOVA SCOTIA.

Census Returns of 1911 . Standard E. & W. 1881-1890.

Age Groups.	Males	Females	E. & W. Death Rate M.	E. & W. Death Rate F.	Comp. Deaths Male	Comp. Deaths Female	Comp. Deaths Total
Under 5	29,817 plus 80	28,720 plus 46	61.59	51.95	1,841	1,494	3,335
5—9	28,061 " 78	27,610 " 44	5.35	5.27	150	145	295
10—14	26,271 " 71	25,475 " 40	2.96	3.11	77	79	156
15—19	25,426 " 62	24,697 " 38	4.33	4.42	110	109	219
20—24	22,076 " 52	21,433 " 36	5.73	5.54	126	118	244
25—34	35,483 " 92	32,337 " 58	7.78	7.41	276	240	516
35—44	28,199 " 77	26,005 " 41	12.41	10.61	350	276	626
45—54	21,320 " 49	20,501 " 35	19.36	15.09	403	309	712
55—64	16,201 " 43	15,648 " 26	34.69	28.45	563	445	1,009
65—74	11,555 " 30	11,353 " 20	70.39	60.36	815	686	1,501
75—	5,960 " 16	7,133 " 13	162.62	147.98	971	1,057	2,028
Totals	250,369 plus650	240,922 plus397					
	650	397	(Ages not given).				10,641
	251,019	241,319					

$$\text{Death Rate of Computed Deaths} = \frac{10{,}641 \times 1{,}000}{492{,}338} = 21.61$$

$$\text{Factor of Correction} = \frac{19.15}{21.61} = .886$$

NOTE.—Persons of unknown age have been added pro rata to the various age and sex groups.

The same process applied to the populations of the other Provinces results in obtaining the following factors of correction which must be applied to their crude death rates in order to bring them into a comparable condition so far as their age and sex groupings are concerned.

FACTORS FOR CORRECTION FOR THE PROVINCES FOR AGE AND SEX GROUPING, CENSUS OF 1911.

Province	Factor of Correction
Prince Edward Island	.870
Nova Scotia	.886
Quebec	.965
Ontario	.981
Manitoba	1.103
Alberta	1.173
Saskatchewan	1.123
British Columbia	1.213

A standardization from the point of view of the urban and rural elements of the populations may be worked out along the same lines as that adopted to standardize for the age and sex groupings.

An example of this, again taking the population figures for the Province of Nova Scotia is as follows:—

Urban Population	Rural Population	Urban Death Rate E. & W. 1881-90	Rural Death Rate E. &. W. 1881-90	Comp. Deaths Urban	Comp. Deaths Rural	Total
186,128	306,210	20.3	17.3	3,778	5,297	9,075

186,128 plus 306,210 = 492,338 = Total population.

$$\text{Computed Death Rate} = \frac{9,075 \times 1,000}{492,338}$$

$$= 18.42$$

$$\text{Factor of Correction} = \frac{19.15}{18.42}$$

$$= 1.039$$

In this way factors of correction for the rural and urban elements of the provincial populations are found to be as follows:—

FACTORS OF CORRECTION FOR THE PROVINCES, FOR RURAL OR URBAN GROUPING, CENSUS OF 1911.

Province	Factor of Correction
Prince Edward Island	1.078
Nova Scotia	1.039
Quebec	1.021
Ontario	1.014
Manitoba	1.028
Alberta	1.038
Saskatchewan	1.058
British Columbia	1.015

Applying these factors of correction to the crude death rates of the provinces as given in the Canada Year Book, the following results are obtained:—

Province	Crude Death Rate	Factor of Correction Age or Sex	Factor of Correction Urban or Rural	Standardized Death Rates
Prince Edward Island	11.89	.870	1.078	11.15
Nova Scotia	16.73	.886	1.039	15.40
Quebec	17.92	.965	1.021	17.65
Ontario	12.63	.981	1.014	12.56
Manitoba	12.03	1.103	1.028	13.64
Alberta	9.69	1.173	1.038	11.79
Saskatchewan	5.54	1.123	1.058	6.58
British Columbia	9.32	1.213	1.015	11.47

The additional information furnished by the census of the Prairie Provinces in 1916, gives data from which more complete comparisons are possible. It will be seen that in each of the three provinces enumerated a material change has taken place in the age and sex grouping, which change is well shown in the relative numbers of the groups in a million.

PROVINCE OF MANITOBA CENSUS OF 1916.

Age.	Actual Population		Number in 1,000,000.	
	Male	Female	Male	Female
— 4	40,196	39,107	72,788	70,816
5— 9	34,190	33,558	61,913	60,768
10—14	27,725	26,780	50,205	48,494
15—19	23,903	23,668	43,284	42,859
20—24	25,930	24,972	46,954	45,220
25—34	54,812	45,312	99,256	82,053
35—44	39,951	30,104	72,345	54,513
45—54	25,457	18,647	46,099	33,767
55—64	13,609	10,248	24,643	18,557
65—74	5,751	4,586	10,414	8,304
75—	1,964	1,762	3,557	3,191
Totals	293,488	258,744	531,458	468,542
	258,744		468,542	
	552,232		1,000,000	

PROVINCE OF ALBERTA CENSUS OF 1916.

Age.	Actual Population		Number in 1,000,000.	
	Male	Female	Male	Female
— 4	35,580	34,762	72,295	70,632
5— 9	29,571	28,331	60,081	57,565
10—14	23,766	22,474	48,288	45,665
15—19	20,079	19,092	40,806	38,793
20—24	23,553	18,813	47,857	38,225
25—34	57,856	39,253	117,553	79,758
35—44	42,191	27,569	85,728	56,017
45—54	24,124	15,480	49,016	31,453
55—64	12,284	7,963	24,959	16,179
65—74	4,484	2,846	9,110	5,782
75—	1,143	943	2,322	1,916
Totals	274,631	217,526	558,015	441,985
	217,526		441,985	
	492,157		1,000,000	

PROVINCE OF SASKATCHEWAN CENSUS OF 1916.

Age.	Actual Population		Number in 1,000,000.	
	Male	Female	Male	Female
— 4	51,391	49,898	79,417	77,110
5— 9	41,379	39,883	63,947	61,633
10—14	31,315	30,097	48,395	46,510
15—19	26,150	24,114	40,412	37,265
20—24	34,519	24,947	53,332	38,552
25—34	77,328	50,100	119,503	77,423
35—44	51,994	32,460	80,351	50,162
45—54	27,482	17,502	42,470	27,047
55—64	14,543	9,738	22,474	15,048
65—74	5,594	3,910	8,644	6,042
75—	1,592	1,167	2,460	1,803
Totals	363,287	283,816	561,405	438,595
	283,816		438,595	
	647,103		1,000,000	

These alterations in the age and sex grouping result in bringing about quite a change in the figures of the factors of correction for this cause, though the factors of correction for the rural or urban elements of the population have experienced little change. These factors are as follows:—

PRAIRIE PROVINCES, CENSUS OF 1916.

Province.	Factor of Correction Age and Sex	Factor of Correction Rural or Urban
Manitoba	1.069	1.029
Alberta	1.100	1.039
Saskatchewan	1.075	1.057

Assuming that the changes in these factors took place progressively in the intercensal years, and accepting the crude death rates as contained in the Canada Year Book as bases, standardized death rates for these Provinces are obtained as follows:—

MANITOBA.

Year	Crude Death Rate	Factor of Correction Age and Sex	Factor of Correction Rural or Urban	Standardized Death Rate
1911	12.03	1.103	1.028	13.64
1912	12.58	1.096	1.028	14.17
1913	13.10	1.089	1.028	14.66
1914	10.78	1.082	1.029	12.00
1915	10.12	1.075	1.029	11.18
1916	9.86	1.069	1.029	10.84

ALBERTA.

Year	Crude Death Rate	Factor of Correction Age and Sex	Factor of Correction Rural or Urban	Standardized Death Rate
1911	9.69	1.173	1.038	11.79
1912	9.71	1.158	1.038	11.67
1913	9.09	1.143	1.038	10.68
1914	7.35	1.128	1.039	8.61
1915	7.30	1.114	1.039	8.44
1916	8.17	1.100	1.039	9.33

SASKATCHEWAN.

Year	Crude Death Rate	Factor of Correction Age and Sex	Factor of Correction Rural or Urban	Standardized Death Rate
1911	5.54	1.123	1.058	6.58
1912	6.29	1.114	1.058	7.41
1913	6.58	1.104	1.058	7.69
1914	5.47	1.094	1.057	6.32
1915	6.68	1.084	1.057	7.65
1916	7.81	1.075	1.057	8.87

When the tabulation of the populations of the Provinces shall have been completed, utilising the information obtained at the last Dominion Census, this computation can be brought down to date. In addition, information may be obtained which may make possible other corrections of the crude rates, allowing for differences other than those considered in this article.

Sex Education

(Continued from previous issue.)

Future of Sex-ethics.—We must not overlook the possibility that the marvellous progress of sanitary and medical science may some day largely reduce the health problems of sex without improving morality. While sex-education was first planned to solve the health problems, the ultimate sex-education must attempt to guide sexual conduct by moral principles. In short, the future teaching of rational sex-ethics must show young people the advantages of monogamic relations of the sexes (see Dr. Cooper's paper on "The Monogamous Ideal," published by A.S.H.A.).

Teaching Eugenics.—The responsibility of the individual for future generations is best taught in courses of general biology in which the study of heredity of plants and animals is now an essential part. However, large numbers of high school and college students do not take courses in biology, and therefore it is desirable that popular series of illustrated lectures, dealing with heredity or genetics as applied to human life, should be made available for all students. This has already been done in many high schools and colleges.

Venereal Diseases.—For the effective combating of venereal diseases it is necessary that the public possess information on various matters concerning sex in addition to hygiene relating to these diseases. As a constructive measure looking toward the future control of venereal diseases, it is necessary that children should be instructed and trained so that they will develop proper attitude and conduct with regard to the sex side of life and its successful management.

A complete programme for combating the venereal diseases requires the measures (a) to (e) below for the protection of uninfected people, and (f) to (j) which are applicable to infected individuals:

(a) Education concerning sex and its manifold relations to human life, including limited and carefully selected information on the dangers and ways of transmission of the venereal diseases.

(b) Religious and ethical instruction intelligently related to the avoidance of sexual relations outside of marriage.

(c) Wholesome recreation and entertainment tending away from promiscuous sexual contact.

(d) Protective social measures to prevent untoward results from casual acquaintanceships in public.

(e) All measures of law enforcement (arrest and trial, probation, jail sentence, enforcement of age-of-consent laws) that will make the uninfected persons cautious with regard to sexual contact.

(f) Proper and adequate treatment and instruction of the infected in protection of others with a minimum of restriction upon their liberty.

(g) Social Service "follow-up" to investigate and bring under similar treatment and instruction when necessary all persons infected as a result of association and contact with the infected.

(h) Isolation, quarantine, arrest and trial, sentence to industrial school, prison farm, or other institution for the unco-operative or incorrigible infected.

(i) Enforcement of laws for reporting of venereal disease without infringement upon personal liberty.

(j) Co-operation of the clergy by demanding evidence of a careful medical examination before marriage.

Nature-study and Biology.—The life-histories of plants and animals as taught in the best nature-study and elementary biology of our schools are important in forming attitude towards reproduction and giving a basis for simple and truthful answers to children's questions as to the origin of the individual human life. It is not claimed that biological studies have a direct moral value.

Literature for Sex-education.—In the world's best literature there is much that teaches important lessons in the field of the larger sex-education or social-hygiene education. In the guise of love, sex problems have always held the prominent place in all literature. Many there are among the believers in the larger sex-education who feel sure that young people's greatest safety lies in having high ideals of affection and of womanhood and manhood; and standard English literature is very helpful in developing such ideals. See pamphlets on this subject published by A.S.H.A.

Home-making.—The home-making courses, commonly known as household arts or home economics, offer splendid opportunities for unobtrusive introduction of high school girls and college women to problems of social hygiene which centre in the home. However, a large proportion of girls and young women do not elect such courses in schools and colleges, and therefore there is need of popular lecture courses on home health and home-making. Such a course of thirty lessons was described in the lecture given by Dr. Florence Richards.

At present there is a recognized weakness in the above suggestion, and in the entire household arts programme, in that no provision is made for reaching boys and young men who should be instructed and influenced concerning the mental, social, hygenic, and economic affairs of the home.

General Science.—Introduction to science, commonly known as "general science" in junior high schools and in the first year of regular high schools, offers exceptional opportunities for giving hygienic instruction to pupils of both sexes. A special pamphlet by the U.S.P.H.S. suggests the possibilities of social-hygienic instruction through general science.

Physical Education and Hygiene.—In the lectures and conferences concerning these subjects there was great emphasis upon the importance of making healthy living as affected by sex a natural part of health education. It was agreed that the teacher of these subjects is in a strategic position for personal guidance. There was general agreement on the importance of organized and directed physical activity as working towards substitution for, not sublimation of, instinctive sexual tendencies.

The experience of a limited number of higher institutions, chiefly those co-operating with the Interdepartmental Social Hygiene Board, demonstrates that some of the most vital instruction and guidance is that which is given in connection with the individual health examinations and conferences in which the analysis of personal habits and conduct of life are an essential part. No higher educational institution can be regarded as truly efficient which does not provide such service.

Problems of Young Men.—We of the older generation gain nothing in trying to minimize the young man's sexual problems, for he is quite conscious that they are insistent. Far better it is that mature men who know life in its completeness should make the young man feel that his problems are not new, and that many another man has met and solved them in such a way as to make life more full of real happiness.

Those who attempt to direct young men through the bewildering mazes of sexual life should hold up ideals not only of pre-marital continence based on a looking forward to love and marriage, but also of post-nuptial temperance and harmonious adjustment between husband and wife.

Personal Influence.—If ever there is a time in a boy's life when he needs intimacy with his mother, or another mature woman, it is in the early adolescent years of twelve to fifteen. A strong woman's heart-to-heart guidance at that time will influence a boy more than all the sex-education which the schools and colleges combined can ever hope to offer. In guiding safely in sex life, we must believe in the "contagiousness of personality."

It matters little for the future purity of the boy on the threshhold of manhood whether he learns to love "the woman" in the dreamland of youth or in the very real world of life. It is simply a question of the intensity of the devotion and of the loftiness of the ideals which she arouses within him.

Sex-education a Guide to Choice.—The one essential task of sex-education in its broadest outlook is to guide natural human beings to recognition and choice of the greatest good in the sexual sphere of life. It can do no more than give the individual a basis for intelligent choice between good and evil; but here, as in all other upward movements of human life, the decision must depend upon a clear and positive recognition of the advantages of the good as contrasted with the evil. Sex-education, like all other education, strives towards ideals that individuals and society may always continue to approach, but will never reach in the ever-advancing improvement of sexual conditions in individual as well as in social life.

Future Results of Sex-education.—We believe in general education because it aims to offer all individuals help in preparation for more efficient life, although it succeeds only in part. Likewise, we should stand for the education of all young people in matters concerning sex because it is certain that such knowledge will function completely in many lives and will work appreciable good in others.

Only the ultra-Utopian dreamer will claim that sex-education can solve all the sexual problems of civilized life, but even the most pessimistic disbeliever in the new movement admits that knowledge of sexual life will be helpful to the great majority of people. It is not to be expected that the educational attack will solve all sex problems for all people.

Sex-education Permanent.—The larger sex-education or social-hygiene education is sure to have a permanent place in the never-ending work of preparing coming generations for the highest development of life's possibilities. Each succeeding generation of young people must be prepared by educational processes to face intelligently and bravely the manifold problems of sex that are sure to come into every normal life.

Social Hygiene and Monogamy.—The American sex-education movement, as stated in the first lectures, aims to educate young people to control sex instincts for the purpose of securing the greatest social health and happiness. The monogamic ideal of morality stands for a great good available in sex life. Monogamic idealism or super-morality is the greatest good within our present vision, for it means the fullest development of the possibilities of affection which in human life has been superadded to the biological reproduction of the highest animals. In short, the whole American sex-education movement, as distinguished from certain mere sex-information or sex-hygiene campaigns, centres in the greatest good or well-being which may come to individuals and society from sexual life culminating in affection as the basis for the monogamic family.

The Victorian Order of Nurses for Canada

AT a Special Meeting of the Board of Governors of the Victorian Order of Nurses for Canada, March 6th, 1922, held at Government House, Dr. M. T. MacEachern, medical superintendent of the Vancouver General Hospital, was appointed Director-General of the Victorian Order of Nurses for Canada, to be associated with the Executive Council and the executive nurses of the Order in the administration of its affairs. Dr. MacEachern has a national as well as international reputation in public health and in the standardization of hospital service. He will arrive in Ottawa to take up his new duties the first week in May.

The position of District Superintendent of Greater Montreal, rendered vacant by the resignation of Miss O. Z. DeLany, has been filled by the appointment of Miss Margaret Moag. Miss Moag was born in Smith's Falls, Ontario, graduating from the Kingston General Hospital in 1904. She served as Assistant and Night Superintendent of the Butterworth Hospital, Grand Rapids, Michigan, for two years, and then was appointed Superintendent of the Mowat Sanitorium, Kingston, Ontario. Miss Moag took her public health course in Detroit, Michigan, was head nurse of the T. B. Hospital, and superintendent of the West End Branch of the public health staff in that city, which position she resigned for Overseas duty, 1917-1919. Since demobilization, Miss Moag, has been doing valuable social service work for the S.C.R. in Ottawa. Her duties will commence April 24th and she brings not only the benefit of her wide experience, but a most pleasing personality to the service in Montreal.

Miss Jessie Forshaw, R. N. Inspector, has returned from a four months' inspection and survey of the Maritime Provinces and the Quebec peninsula, in response to the great demand for community nursing in Eastern Canada. While in the Maritime Miss Forshaw addressed many of the local associations and other welfare organizations in the interests of Public Health. Miss Forshaw leaves April 18th to organize some new districts in Northern Ontario.

Miss Alberta Burns, of the Toronto staff, has accepted the position of nurse in charge of the Sackville, N.B., district.

Mrs. Hanington, the Chief Superintendent, leaves for Cochrane April the 18th to consult with the Board of the Lady Minto Hospital there with regard to the establishing of a training school in connection with that institution. This training school will have affiliation with some of the large Ontario hospitals. From Cochrane Mrs. Hanington will go to Sudbury to establish a nursing service at the request of both the citizens and the Metropolitan Life Insurance Company of Sudbury.

The office of the Central Board is being moved from the Holbrook Chambers to the Jackson Building, where better accommodation for the increasing activities of the Order are available.

Social Background

Mental Defect and Venereal Disease

MISS F. E. BROWN, *Special Supervisor, Department of Public Health, Toronto.*

THE exact number of persons suffering from venereal disease in any community at any time is difficult to compute since the reporting of these diseases is not and probably never will be complete.

As a result of examinations made in this country and others in connection with selected groups, certain conclusions have been reached as to the prevalence of these diseases. It is estimated that 8% of our Canadian population, or approximately 640,000 persons, are infected with syphilis and several times as many with gonorrhoea. It must be remembered that this is an estimate only.

The number of deaths which occur each year is not definitely known since the stigma which is attached, even in death, to persons so infected, results in the reporting of these deaths as due to other causes. Enough, however, is known of the results of venereal disease to state that they are the first among diseases causing suffering and death. When we consider the deaths which occur each year due to locomotor ataxia and general paralysis of the insane, which are in 100% of the cases due to syphilis, the deaths of infants during the first few weeks of life which are due to the same cause, as well as the more obscure diseases of the heart, blood vessels and nerves whose cause may be traced to the organism causing syphilis, we begin to realize the significance of the statement of the late Sir William Osler: "Syphilis at the top an easy first among the infections as a cause of death." Concerning the other disease, gonorrhoea, the same great authority has said: "From the standpoint of race conservation, gonorrhoea is a disease of the first rank. With '30-40' of all cases of congenital blindness, with the chronic pelvic mischief in women, with the unhappiness of sterile marriages, with these and many minor ailments stored up against it, we may say that while not a killer, as a misery producer Neisser's gonococcus is king among germs."

The economic loss to our country each year, due to venereal disease is difficult to estimate, but if we count the cost of maintaining the inmates of our insane asylums whose condition is due to syphilis, the deaf and blind in our Government institutions who are there through the same cause, and the widows and orphans made dependent because of the death of the breadwinner and locomotor ataxia or general paresis of the insane at middle life, we shall have a heavy account to settle against these diseases.

Before the war little was done in a general way toward the control and prevention of venereal disease. The knowledge brought to the public through the war concerning the prevalence of these diseases and their disastrous consequences, not only to the individual, but to the nation itself, was responsible for an entire change of attitude on the part of the public toward this question. The cure and prevention of these diseases ceased to be an individual matter, and it became a matter of national concern that they be treated, the treatment to be paid for, if necessary, out of public funds. It was this new attitude which made it possible for governments to bring in legislation dealing with the control of venereal disease and to authorize appropriations out of public funds to carry on a campaign of treatment and education.

Ontario is at present well equipped to deal with the disease end of the venereal disease problem. Government clinics have been established in which last year over 40,000 treatments were given.

We have a good law, well supported by public opinion to deal with the recalcitrant, and we have a well organized volunteer society carrying on constantly a campaign of education. Much has been accomplished in the interests of public health. New cases of disease have been located and placed under treatment, infectious cases have been isolated and much future suffering has been spared humanity.

In spite of all this we do not seem to make much of an impression upon the problem. New cases of infection occur daily and our clinics have constantly new recruits. It becomes evident that the disease problem is not solved by the provision of medical means alone. The causes and source of the disease do not end with the spirochaete and gonococcus, but go deeply into the make-up of society and of the individual. It will need the co-operation of the best forces of the community with the health authorities if these diseases are to be prevented and the medical means provided made reasonably efficient.

It is a well-known fact that prostitution, either professional or clandestine, is the greatest source of infection in this disease.

Venereal disease is the result of sexual promiscuity, because the physical facts of the transmission of the disease make it so. The person (male or female) who is sexually promiscuous constitutes a very serious problem from the disease point of view. These persons rarely escape disease. A complete cure in their case is practically impossible, and because of their mode of living they become the most prolific sources of infection.

The removal then of the cause and source of these diseases means a change in the habits of living of these persons.

How far is mental deficiency responsible for sex delinquency and venereal disease?

A fallacy common to social workers is the belief that all persons who have broken the moral law regulating sex conduct are mentally abnormal. It has been an easy way to account for and dispose of persons whose conduct we cannot understand nor sympathize with. It is certain that mental abnormality is an important factor in causing irregular sex conduct with resultant illegitimacy and venereal disease, but this is not the whole story by any means. The persons who apply to our public clinics for free treatment include a large number whose mentality is below normal, but there is no doubt that the private patients of our venereal disease specialists include persons who are not mentally deficient if success in life is evidence of mental normality.

In studying the causes of sex delinquency and prostitution I think we must keep in mind the fact that we are dealing with the expression of one of the most fundamental of human instincts, whose control varies with the individual and the surroundings in which he finds himself. In my opinion one of the first causes is the present attitude of society toward this question, "the double standard of morality." Other important causes are bad home conditions which include, bad example in the home, lack of parental control, *bad environmental conditions,* which include lack of educational opportunity, or industrial training, monotonous work, bad companions and lack of proper recreation.

Conditions due to individual make up including bad heredity, abnormal physical and mental make up, and early sex experiences.

In studying the causes which contribute to sex delinquency all these factors must be taken into consideration. The point to be remembered is, however, that if the delinquency arises through any one of the other causes the delinquent may become a normal individual when the cause is removed. If the delinquency is due to mental deficiency, the outlook is entirely different. Mental deficiency is incurable and irremediable and any amount of reformative work will not succeed in reforming the individual. Therefore, this is a point which it is important to decide before undertaking any plan of rehabilitation for the delinquent.

It is a well-known fact that the mental deficiency rate is hign among female prostitutes, especially professional prostitutes.

Statistics issued by the American Social Hygiene Association in July, 1919, state that 33% of all prostitutes in the United States are feeble minded. This estimate is based on the examination of 2,738 prostitutes in the following institutions:

	Number examined.	Percent found feeble minded.
Illinois Training School for Girls	104	97
Chicago Morals' Court	126	85.8
Segregated District of a city in Virginia	639	71.6
Chicago Morals' Court	639	62
Report of Mass. Com. for the Investigation of White Slave Traffic	300	51
Mass. State Reformatory for Women	243	49
California School for Girls	124	34
Seventh Annual Report, New York Probation and Protection Ass., 1915	164	34
Boston Municipal Court	100	30
Bedford Reformatory, New York	647	29
Probation and Protection Ass., 1917	171	27

Mr. Justice Hodgins' report of 1919 gives the proportion of mental defectives in the population of Toronto institutions dealing with female sex delinquents, as follows:

Mercer Reformatory for Women	23%
Salvation Army Home	30%
Salvation Army Maternity Home	50%
Alexandra Industrial School	85%
The Haven	75%

The rate of venereal disease among prostitutes is very high, depending on the length of time they have followed the life. It is estimated that 75% of professional prostitutes have one disease or both. Of 142 persons, nearly all of them sex offenders, in the Mercer Reformatory at the present time, 100, or 70.42%, are under treatment for venereal disease. In a survey of 100 cases attending the clinic for syphilis at the Toronto General Hospital, 899 persons were sexually immoral, and only eleven were classified as normal mentally.

The definition of Mental Deficiency as given in *The Mental Deficiency Act of Great Britain,* 1913, *is as follows:*

(*a*) *Idiots.*—Persons so deeply defective in mind from birth or from an early age as to be unable to guard themselves against common physical dangers.

(*b*) *Imbeciles.*—Persons in whose case there exists from birth or from an early age mental defectiveness not amounting to idiocy yet so pronounced that they are incapable of managing themselves or their affairs or in the case of children being taught to do so.

(*c*) *Feebleminded persons.*—Persons in whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision for their own protection, and the protection of others, or in the case of children that they by reason of such defectiveness appear to be permanently incapable of receiving proper benefit from the instruction in ordinary schools.

(*d*) *Moral Imbeciles.*—Persons who from an early age display some permanent mental defect, coupled with strong vicious or criminal propensities on which punishment has little or no deterrant effect.

The first two groups cause little trouble from the venereal disease point of view, because of the extent of their defect they are given sufficient protection through family or institutional care to keep them out of harm's way. It is the last two groups, especially the women of the group, which constitute our problem. The feebleminded boy or man does not constitute as pressing a social problem. A defective girl, especially the moron type, is frequently possessed of great physical attraction as a result of which men of normal mentality are led to approach her. The feebleminded boy or man is ordinarily unattractive to the normal woman.

Contrary to popular opinion the mentally abnormal girl is not necessarily possessed of extraordinarily developed sex instincts, but rather of markedly undeveloped inhibitions. She usually plays the passive role, is very susceptible, and becomes the dupe of the first person who wishes to do her harm.

From the standpoint of cure the mentally defective patient in our venereal disease clinic is well-nigh hopeless. They come to us from maternity homes, courts and jail. After a few treatments they disappear and are lost in our city's underworld, reappearing in hospital, court or jail. After months of intensive treatment in hospital or reformatory they are discharged physically clean and full of good intentions to commence all over again and "go straight." In a few months they return, usually reinfected, and the same story commences all over again. They are not capable of profiting by experience, fear has no permanent appeal, and punishment is useless.

It becomes evident, then, that the prevention of venereal disease in the future and the making effective of treatment provided for this disease depends to a large exetnt on what we do with the feeble minded. As long as they are in our midst we have an ever-present source of infection.

The statistics regarding mental defectives have been gathered in the past through the examination of selected groups, usually the misfits and anti-social members of society, i.e., the population of reformatories and penal institutions.

During the war an opportunity was given for the first time of examining large numbers of the so-called normal members of society. The results obtained have given us a new concept of the feeble minded problem. We have learned that there are large numbers of mental defectives in our midst living useful harmless lives. They are the people who are doing the simple tasks of life, "the hewers of wood and drawers of water." We have learned also that the anti social acts of many other defectives might have been prevented had their defect been recognized early enough and provision made for their proper education, training and supervision in the community.

There is another group of persons, however, who by reason of defect in mental or emotional makeup can never be trained to become good citizens. Of these Treadgold has said "they are inherently incapable of conforming to the legal and moral codes of society." It is this group which causes most of the trouble, and for a certain proportion of these no remedy will avail but the taking away of the liberty they are not capable of using. It is this group that constitutes the great problem in an attempt to control the spread of venereal disease. What are we doing in Ontario with the feeble minded?

In 1917, a commission was appointed by the Ontario Government to consider and inquire into the existing methods of dealing with imbecile feeble minded or mentally defective persons in the

Province of Ontario. Mr. Justice Hodgins, in submitting his report in 1918, comes to the following conclusions:

1. In the Province of Ontario feeble mindedness or mental deficiency has never been legally defined nor practically dealt with. There is one institution, excellent in kind and management, into which all kinds of mental defectives, except the insane, have been sent, when there was room for them, or when the various penal or corrective institutions got tired of caring for them or became overcrowded. But the Province has not, and never had, any machinery for ascertaining mental defectives, for educating them, or for trying to prevent their easy development into irreclaimable criminals. Even the legislation in aid of neglected children and the school acts providing for the education of the young deal wholly with normal children. Those who are not normal are left to find their way into the courts and thence to jail, or remain to be a constant factor in hindering the education of ordinary children and demoralizing their conduct.

The magnitude of the evil, thus left untouched, is very great. There is no more potent influence in the production of vice and crime than the unwatched mental defective. This Province is "no exception to the rule, abundantly proved in other countries, that the largest proportion of crime and of the cost of endeavouring to counteract it, are due to mental defectives who have been allowed to continue at large. Never having had any useful training in their youth, they are allowed in maturer age, as "repeaters," to congest the courts and crowd the jails. The inter-relation of crime and feeblemindedness is put beyond all controversy by what is detailed in this report.

"If the cardinal fact could be assimilated that the elimination of the mental defective from the school and from the street, and from the agencies engaged in reforming character, would render the efforts of teachers and social workers comparatively easy, and empty the jails of over half their inmates, and that these unfortunates can, if taken in time, be made comparatively happy and useful, there would be little time lost in bringing about that desired result.

"It is the mental defective among the population of our Province who has, and, if left untouched, will, continue to hamper and defeat in large measure the social and educational work done in our midst and to waste the effort to bring about better conditions. There is therefore great need for an immediate, intelligent and systematic effort to ascertain, record, educate and care for the mentally defective, to know whom we mean by that term, and how many there are. It is necessary to realize that they fall broadly into two classes, the comparatively harmless and the anti-social; and also to grasp, as the leading idea, the fact that while these two classes may need, in the end, totally different treatment, the whole benefit to the public is brought about by the application of proper care and training to all who come within the definition of feeble mindedness, provided they undergo it at an early age."

It is now four years since this report was presented, and very little has been done except in the case of the schools to carry out the recommendations suggested to remedy the conditions as mentioned in this report.

As social workers interested in the welfare of those who cannot be expected to help themselves, it would seem that we should do all in our power to see that the recommendations contained in this report are made effective.

From my own observation I would say that we have still a long way to go before the public can be persuaded to support some of the recommendations contained in this report. One finds the greatest skepticism toward the question of the inter-relation of mental deficiency and delinquency on the part of people whom one would expect to know better and whose help and influence is needed to bring these reforms about.

Perhaps they are right. There is a great deal in "the wisdom of the vulgar," spoken of by Professor Hutton recently. The instinct of the man on the street is usually sound, and it is a serious matter to interfere with personal liberty. We shall look to the psychiatrist to convince us that he is right, and we have great need of a campaign of publicity to bring the facts already known home to the public.

News Notes

St. John, New Brunswick, has recently completed a most successful drive for "Finding Cases" of Tuberculosis. Four clinics were maintained daily for three days and had to be opened the fourth day. Hundreds of citizens presented themselves, many having to be turned away. The present difficulty is finding suitable treatment facilities for cases.

Hon. John Michael Uhrich, M.D., the newly appointed Minister in charge of the Bureau of Public Health for Saskatchewan, and also holding the portfolio of Provincial Secretary, has practiced medicine in the Province since 1908. Dr. Uhrich is a son of a French Veteran of the 1870 war, and was born in Ontario in 1877, graduating in medicine from the Northwestern University of Chicago in 1902. He has represented Rosthern in the Legislative Assembly since the last general election in 1921.

The Annual Meeting of the Ontario Branch of the Canadian National Council for Combating Venereal Diseases was held in London, May 12th. The following officers were elected:—President, Albert E. S. Smythe, Toronto; Secretary, Miss Gertrude Tate, Toronto; Hon. Treasurer, L. M. Wood, Esq., Toronto.

President A. Blook, of the Canadian Association for the Prevention of Tuberculosis, has resigned from the position of Sheriff at Regina, Sask., and has accepted the appointment of Superintendent and General Manager of the Saskatchewan Sanatorium at Fort Qu'Appelle.

"There is nothing so important to public health as a properly pasteurized milk supply throughout the Province, and particularly in the cities," says Dr. M. M. Seymour, Commissioner of Bureau of Public Health, Saskatchewan.

Every spring I endeavor to have the municipal authorities recognize this and take action to have this condition enforced by law, and I am confident in saying that were the general public aware of the great amount of disease spread by raw milk, they would not hesitate to demand a pure fresh supply.

Most of our cities and towns have enacted a by-law having pasteurization compulsory, and I therefore regret that the governing authorities of our capital city have not seen eye to eye with medical knowledge in this respect, having in 1921 refused to enact similar measures, but I sincerely hope that 1922 will see the passing of this by-law.

The milk pesteurizing plants now operating throughout the Province are now operating under the direct supervision of the Bureau of Public Health, and scientific methods are strictly employed.

Raw milk is what may be termed an intensive disease container, and has in countless instances been proven as the agent of epidemics, particularly of typhoid, scarlet fever and diphtheria.

Unless pasteurization of milk supplies, in particular those of cities, is enforced, there is no barrier in the way of another outbreak of typhoid fever similar to that which occurred last year in our capital city, when 80 cases and 10 deaths in a local institution were traced directly to infected raw milk.

Summer will soon be with us, a season when these outbreaks are most intense, and therefore early action to strengthen our position in this regard is imperative for our health.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF MARCH, 1922.

COMPARATIVE TABLE.

	1922		1921	
Diseases.	Cases	Deaths	Cases	Deaths
Small-pox	113	0	526	4
Scarlet Fever	446	18	436	16
Diphtheria	320	32	447	47
Measles	695	4	238	4
Whooping Cough	61	13	237	19
Typhoid	21	11	30	11
Tuberculosis	172	136	181	134
Infantile-Paralysis	.....	.....	.....	6
Cerebro Spinal Meningitis	8	7	.....	5
Influenzal Pneumonia	.....	84	.....	42
Primary Pneumonia	.....	409	.....	315
	1,836	714	2,095	603

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

	1922	1921
	Cases	Cases
Syphilis	218	211
Gonorrhoea	252	157
Chancroid	4	10
	474	378

The returns made of Communicable Diseases by local Boards of Health for the month of March show a great reduction in smallpox, diphtheria and whooping cough compared with March, 1921.

Increases are reported in scarlet fever, measles, influenzal pneumonia and primary pneumonia. The total decrease in cases is 259, while the deaths show an increase of 111, due to influenza and pneumonia, as may be seen in the comparative table.

NOTICE TO MEDICAL OFFICERS OF HEALTH IN RESPECT TO MATERNITY BOARDING HOUSES

Medical Officers of Health not already acquainted with the Maternity Boarding House Act, are requested to look up the Act, Chapter 230, R.S.O., 1914, and familiarize themselves therewith, and follow the procedure laid down in the Act.

JOHN W. S. MCCULLOUGH,
Chief Officer of Health.

REGISTRATION OF BIRTHS.

COPY OF CIRCULAR LETTER TO DIVISION REGISTRATORS THROUGHOUT THE PROVINCE.

Spadina House,
Toronto, May 1, 1922.

DEAR SIR,—

For some time the Department has been endeavouring to improve registration of births in Ontario by making appeals to physicians to issue their "Notices" in all cases.

Notwithstanding these efforts, approximately ten to fifteen per cent. of births are unregistered, and the Department has come to the conclusion that the only plan whereby these notices can be secured is to institute legal proceedings against physicians neglecting this duty.

You are, therefore, herewith instructed to forward to this office, along with your monthly returns, a list of physicians who fail to forward the "Physician's Notice" within 48 hours after the date of the birth, giving specific instances of such neglect with names, dates, etc.

It would be advisable that you notify all physicians—through the press or otherwise—practicing in your municipality that you are so instructed, and that failure to furnish the aforenamed "Notice" will involve prosecution.

Yours truly,
JOHN W. S. MCCULLOUGH,
Deputy Registrar-General.

Editorial

ON TO ST. JOHN.

A MESSAGE FROM THE HON. WM. F. ROBERTS, PRESIDENT OF THE CANADIAN PUBLIC HEALTH ASSOCIATION.

Your president has done but very little in the way of writing for the Public Health Press during the last year, and therefore would like to suggest that he has not lost sight of perhaps what is more important, organization work through correspondence, also endeavouring to crystallize plans already made and the institution of newer ones for the future welfare of our Association, which should be one of the most important factors in the conservation of the health and lives of our Canadian people.

There seems to have been a doubt in the minds of some, as to whether this organization had a field of usefulness to serve, intimating, possibly, that the one association, the American Public Health Association, might have succeeded better, inasmuch as this was a special branch of medicine, and that the Canadian public health population was too small for a separate organization. I take it, good arguments were forthcoming in favour of both ideas. But that now is a matter of history. The Canadian Public Health Association is here, and I feel we all sincerely believe, is here to stay.

Already it has performed good service, and there remains yet much to be done. Its future usefulness largely depends on the co-operation, not only of those directly interested, but to medical men and women in general, for we all realize we are rapidly approaching the day when preventive rather than curative medicine must prevail. Therefore it behooves all that they become affiliated with an organization whose aims and objects are along these lines.

It should be our object to make this institution so efficient and popular that it will be felt to be indispensable to our Canadian life.

This year we are meeting in annual convention at Saint John, New Brunswick, "down by the sea." New Brunswick is known, and justly so, as "The Sportsman's Paradise."

For beauty of scenery, our mountains, meadows and valleys, our rivers, lakes and streams, cannot be surpassed. Considering the area of the province and its mileage of roads, I think I can safely say, we have as good highways as can be found in Canada.

St. John is the commercial metropolis, situated at the mouth of the Saint John River, four hundred and fifty miles in length. This river empties into the waters of the Bay of Fundy, an arm of the Atlantic Ocean, by way of the "Reversible Falls," a most unique phenomenon, and through the Saint John Harbour, which is the winter port of Canada.

We feel safe in saying that once you come to Saint John, particularly in the month of June, you will always wish to return. We therefore extend, not only to the public health people of Canada, but to the medical profession and the nursing fraternity, a most hearty invitation to come to the "Real East" this year. Make this "Canadian Public Health Congress"—for it embraces the annual meeting of the Canadian Association for the Prevention of Tuberculosis as well as that of the Canadian National Council for Combating Venereal Diseases—notable throughout the public health world, from the standpoint of attendance and interest.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society

Health in Industry.

Dr. J. G. Cunningham, Director of Industrial Hygiene, Provincial Board of Health, Ontario, shows the relationship of health in industry to the health of the community, and describes a system of industrial medical service in use by small plants that cannot afford the undivided services of a physician. ("The Public Health Journal," Toronto, March, 1922, page 114.)

Industrial Medical Service.

The introduction of a part-time medical service in a small industrial plant with 115 employees resulted in a reduction in the daily absence rate from 6% to 2.7%, and lowered the labour turnover from 25% to 14.7%. The cost of this service was $14.40 an employee per annum. ("The Journal of Industrial Hygiene, April, 1922, page 363.)

Physical Education.

A course of study in physical education and the method of application to elementary public schools. ("American Physical Education Review," April, 1922, page 160.)

Prevention of Diphtheria.

Dr. Wm. H. Park, of the New York City Department of Health, gives a complete review of the method and results of active immunization with toxin-antitoxin against diphtheria. ("Monthly Bulletin of the New York City Department of Health," February, 1922, page 25.)

Rural Child Hygiene.

The problem of the rural child and its solution as seen by the Director of Public Health Nursing of the University of Michigan. ("Public Health," Michigan Department of Health, March, 1922, page 509.)

The Recent Influenza Epidemic.

A study of mortality from influenza during the past few months shows conditions this year to be those usual for winter respiratory diseases and not a recrudescence of the influenza epidemic of three years ago. ("Statistical Bulletin," Metropolitan Life Insurance Company, March, 1922, page 1.)

Provisional Programme Health Congress

St. John, N.B.

Canadian Association for the Prevention of Tuberculosis—President: Sheriff Cook. Secretary: Dr. R. E. Wodehouse, Bank Street Chambers, Ottawa, Ont.

Canadian Public Health Association—President: Hon. Dr. Roberts. Secretary: Dr. R. R. McClenahan, 205 Bloor Street West, Toronto, Ont.

Canadian National Council for Combating Venereal Diseases—President: Hon. Mr. Justice Riddell. Secretary: Dr. Gordon Bates, 154 Bay Street, Toronto, Ont.

June 6th, 7th, 8th, 9th.

Tuesday, June Sixth.

9-11.30 a.m.—Registration.
11.30-12.30 noon—Moving Pictures—(a) How Life Begins.
(b) Industrial Health Film.

2-4 p.m.—Social and Mental Hygiene Laboratory Sections, C. P. H. A. Canadian National Council for Combating Venereal Diseases (Joint Meeting.) Chairman: Mr. W. B. Snowball, Chatham, N.B.

(1) "The Nature of the Substance Responsible for Complement Fixation in Tuberculosis."— Dr. R. W Hodge, Toronto.
(2) Social Service follow-up with references to Venereal Diseases—Dr. Gordon Bates, Toronto.
(3) Work of Dominion Department of Health in Venereal Diseases—Dr. J. J. Heagerty, Ottawa.
Discussion—Dr. A. H. Desloges, Montreal.
(4) The Place of the Sanitary Engineer in Public Health—Mr. F. A. Dallyn, Toronto.
(5) Laboratory Paper No. 6.—Interpretation of Wassermann Test—Dr. H. K. Detweiler, Toronto.
Discussion arranged later.

2-4 p.m.—Canadian Association for the Prevention of Tuberculosis and Child Welfare Section, C. P. H. A. (Joint Meeting).
Chairman—Sheriff Cook.

(1) Tuberculosis in School Children—Dr. Ferguson.
Discussion—Dr. Craig.
(2) Subject to be announced—Dr. Wm. Hart, Ottawa.
(3) Breast Feeding—Dr. George Smith, Toronto.
Discussion—Dr. W. J. Bell.
(4) Municipal Hospitals for Treatment of Tuberculosis—Dr. M. M. Seymour, Regina.
Discussion—Dr. Laidlaw, Edmonton.

8 p.m.—Chairman—His Hon. Lieutenant-Governor Wm. Pugsley, Hon. President, C. P. H. A.
Speakers—Dr. Chas. E. North, New York City.
Hon. W. F. Roberts, President's Annual Address.

Wednesday, June Seventh.

9.30-12.30—Child Welfare Clinics. (Location announced later.)
Conducted by Dr. George Smith, Toronto.
Dr. W. J. Bell, Toronto.
Dr. W. E. Rowley, St. John, N.B.

9.30-12.30—Venereal Disease Clinics. (Location announced later.)
Conducted by Dr. Gordon Bates, Toronto.
Dr. J. A. McCarthy, St. John, N.B.

9-10 a.m.—Executive Meeting, Canadian Association for the Prevention of Tuberculosis.

10-11 a.m.—Executive Meeting, Canadian Public Health Association.

2- 4 p.m.—Women's Meeting—Sheriff Cook, President, Canadian Association for Prevention of Tuberculosis.

A motion picture showing women's work in fight against Tuberculosis in Saskatchewan.

A number of other interesting features are being arranged by a strong committee of women. Announcement later.

2- 4 p.m.—Open Meeting. Canadian Public Health Association and Canadian Association for Prevention of Tuberculosis.
Chairman—Hon. Dr. Roberts.

(1) Non-tuberculous Lung Conditions. (Lantern slides.)
Dr. Pritchard, Battle Creek, Michigan.
Discussion—Dr. K. R. Byers.
(2) Genito-Urinary Tuberculosis—Dr. McKenzie, Montreal.
(3) Thoracoplasty—Dr. W. G. Archibald, Montreal.
Discussion—Dr. Miller.
(4) Simplified Diagnosis of Early Tuberculosis—Dr. Bray, Saranac.
Discussion—Dr. Hart.

LABORATORY SECTION—
(1) Subject to be announced later—Dr. Harris, Dept. of Health, Ottawa.
(2) The Intracutaneous Method as Applied to Standardization of Diphtheria Antitoxin—Dr. D. T. Fraser, Connaught Laboratory, Toronto.
(3) A New Method of Carrying Out the Precipitin Test—Prof. James Miller, Queen's University, Kingston.
(4) Agglutination Phenomenon with Diphtheria Antitoxin—Mr. P. J. Moloney, University of Toronto.
(5) Morphological Changes in Bacteria Induced by Varying the Hydrogen Ion Concentration of the Media—Prof. G. B. Reed, Queen's University, Kingston.
(6) The Public Health Laboratory and the Diagnosis of Small-pox—Dr. R. D. Defries, Connaught Laboratory, Toronto.

4.30-10 p.m.—Sight-seeing trips and social evening.

Thursday, June Eighth.

9.30-12.30—Tuberculosis Clinic. (Site announced later.)
Clinicians—Dr. Pritchard, Battle Creek, Mich—X-Ray and Tuberculosis.
Dr. Bray, Saranac—Physical Examination.
Dr. Archibald, Montreal—Intestinal Tuberculosis.

9 a.m.—Annual Meeting—Canadian National Council for Combating Venereal Diseases.

2-4 p.m.—Child Welfare Section, C. P. H. A.
Chairman—Dr. W. J. Bell.
(1) Prevention of Tuberculosis in Pre-School Age—Dr Holbrook, Hamilton.
(2) Child Welfare in Canada—Dr. Helen MacMurchy.
Discussion—Dr. Young.
(3) The Practitioner in Child Welfare—Dr. W. J. Bell.
Discussion—Dr. George Smith.
(4) Child Welfare Film.

2-4 p.m.—Venereal Disease and Mental Hygiene Sections, C. P. H. A.
Chairman—Dr. A. H. Desloges.

(1) Training of Sub-Normal Children—Dr. Bryson, Halifax.
(2) Mental Survey of School Children, Toronto—Dr. Eric Clark, Toronto.
(3) Mental Hygiene Surveys—Dr. C. K. Clarke or Dr. C. M. Hincks. (Programme of these three papers to be arranged by Dr. Hincks or Dr. Beattie.)
(4) Some Results of the Campaign Against Venereal Diseases—Dr. N. Fournier, Montreal.
(5) Venereal Disease paper. (Title to be announced later.) Dr. G. Ahearn, Quebec.

4.30 p.m.—Reception.

8.30 p.m.—General Meeting.
Chairman—Hon. Dr. Roberts.

(1) The Role of the Official and the Voluntary Health Agency—Dr. John Amyot, Deputy Minister of Health.
(2) Tuberculosis in France—Dr. Bernard Wyatt.
(3) The Role Played by Pure Milk in Public Health—Dr. C. J. O. Hastings, Toronto.

Friday, June Ninth.

9-11 a.m.—Round Table Discussion on Co-operation of Voluntary Agencies.
Chairman—Hon. Dr. Roberts.

Representation from—
Dominion Department of Health.
Canadian Association for the Prevention of Tuberculosis.
Canadian National Mental Hygiene Association.
Sections of Canadian Public Health Association.
Canadian Red Cross Society.

11 a.m.—4 p.m.—Boat trip around harbour and to Partridge Island, with visit to Quarantine Station.

LIST OF HOTELS WITH PRICES.

Royal Hotel—$3.00 per day and up. European plan.
Victoria Hotel—$3.50 per day. American plan.
Dufferin Hotel—$4.00 and $4.50 per day. American plan.
Clifton House—$3.00 per day. American plan.
Sign o' the Lantern—$2.00 per day (rooms) breakfast only.

Make reservation with Dr. Wm. Warwick, District Medical Health Officer, St. John; or at the hotels direct.

The Public Health Journal

VOL. XIII. TORONTO, JUNE, 1922 No. 6

Public Health Organization

BY JAMES ROBERTS, *M.D., Medical Officer of Health, Hamilton, Ont.*

THE Modern Public Health Movement is less than a century old. A more accurate recital of its life history would ascribe its birth to the pioneer studies of Louis Pasteur. Its period of adolescence may be said to have been contemporaneous with the discoveries of Koch, Lister, Eberth, Gaffky, Klebs, Loeffler, Manson, Ross, Walter Reed and others, during which time the causative bacteria and protozoa of the more fatal infections were isolated and studied, attention focused on the person sick with disease and great reliance laid on the principle of quarantine and the practice of disinfection.

The last ten or fifteen years has witnessed a radical transformation in the minds of those entrusted with official health administration, with respect to two important phases of the Public Health Problem at least. In the first place the old obsession not at once dissipated by laboratory investigation, that the source of man's infections were traceable to his environment, has rather suddenly been displaced by present day beliefs resulting from fuller and more accurate knowledge gained by a combination of laboratory and epidemiological studies. The modern theory of infection finds the source of disease in the individual himself—the excretions and emanations of his body, and the transmission of the virus to his fellow beings by contact, direct or indirect, the well nigh universal route.

Secondly, the perspective of the sanitarian, has undergone a remarkable change and his horizon has tremendously widened.

Papers at a conference representative of every Health Department in Ontario on topics such as "Prenatal Care," "Squint," "More efficient care of Mothers," "How to produce a clean and safe milk supply," attest the character and significance of the revolution in our ideas as to what may reasonably be considered within the province of the health official and calculated to absorb his energies.

In addition to the control of communicable diseases, supervision of water supplies, sewage, housing, and elimination of nuisances, we do not hesitate to include in the category of Public Health Activities such subjects as Infant Welfare, School Hygiene, Public Health Education, Industrial Hygiene, Dental Hygiene and Personal Hygiene. These and other matters of perhaps lesser but vital importance are to-day regarded without suspicion of protest as coming legitimately within the purview of the regularly constituted health authorities.

The place of Mental Hygiene in the future program of public health, I might allude to separately because of its importance. "Doubtless," says Stewart Patton, "we shall soon vizualize the present opportunity, see the problems in their right perspective and make provision for teaching mental hygiene in connection with departments of hygiene. As a matter of fact many physicians do not yet recognize the importance of considering these two departments, physical and mental hygiene, as inseparable and representing two phases of one great problem."

In the April issue of *Mental Hygiene*, Haven Emmerson says, "we can't go forward on any public-health campaign without:

Public understanding.
Medical education and leadership.
Facilities for diagnosis and care.
Study, research, and information.

All health campaigns have gone through these phases. The principles are similar in all; the results in mental hygiene promise more than others because of the quality of them. The essential spirit of health and happiness is mental and has a future as far beyond that of physical-disease control as the mind of man is the greater objective for which we build the healthy body."

In this brief reference to the history of the Public Health Movement and what it to-day comprehends, I have tried to justify my belief that this movement freed from its heritage of superstition and fallacy, and having profited by the mistakes, and overconfidence of its youth, is now at the threshold of its maturity anticipating a measure of future success as shall result not only in reducing infection to a minimum, but in ensuring to everyone a hitherto undreamed of legacy of longevity and happiness.

Such of the more intelligent and altruistic sections of the laity as take an interest, active or otherwise, in the welfare of the community have grasped the fundamental conceptions of the New Public Health. Will it be necessary for this educated lay public to point out to the medical profession and the existing health administrators their present opportunity and responsibility, and to appraise them of the fact, that insofar as the future of their work and their influence is concerned, it may well be that the present is the accepted time, and to-day the day of salvation?

My object therefore in this paper is merely to suggest in what directions future efforts of our Health Departments might be profitably exerted, while attempting also to outline very briefly changes in machinery and construction necessary to maintain our position as leaders and directors in the new era, and calculated at the same time to secure best and most permanent results.

The present system of administration reflects quite characteristically the rapidity of the evolutionary changes in our ideas with respect to the causation of disease, and the method of prevention, and in my opinion leaves much to be desired. It may be claimed, and has been emphasized from time to time by those qualified to speak with authority, that variety of service, difference of organization and lack of standard method of procedure in Health Department Local Administration have peculiar points of advantage, and it might further be urged that to set a pattern or standard method of procedure might tend to minimize the value of the personal equation in the success of such health administration, and to stifle local initiative and dampen local enthusiasm. These arguments are worthy of mature consideration, but if a uniform method of procedure, a standard unit of organization, constituting a system by which, for instance, facilities for good work, scope of activities could be estimated, and results compared, while at the same time our service to the public could be simplified and rendered of the highest efficiency, we as executive health officers, ought to be prepared and willing to sacrifice our individual ideas and predilections to the dictates of a higher and better service. How best can this be achieved?

I believe by an extension and elaboration of our present system of Health Districts. No one in close touch with matters pertaining to the Public Health in the Province of Ontario during recent years, will question for a moment that the revision of the Public Health Act of 1912, the amendments thereto, and particularly the division of the Province into approximately equivalent units of population for purposes of greater efficiency of administration, has been productive of encouraging results. Among the changes for the better, it is safe to say that the more direct interest of the District Health Officer in the work of the Local Board has had a stimulating influence on the work of the Local Officers, and has led to the awakening of a keener interest in health matters in very many communities throughout the Province. The sympathies of the District Officers have been enlisted on the side of Local Officers to the extent of securing better salaries, official backing, and in many instances more generous finances for the carrying on of effective work. It has become the exception rather than the rule for outbreaks of infectious disease to assume dangerous proportions before arousing the attention of the local authorities, which fact in itself regardless of other considerations, tends greatly to increase the confidence of the general public in the purpose of Health Officer and to create respect for his official position.

Several of the states in the American Union have evolved a plan similar in operation to that in Ontario for the appointment of District Officers, the duties of which are similar in character but with salaries provided for rather meagre and unsatisfactory. The Ohio law of 1919 provides that each county and each city of more than 25,000 population must employ for full time service, a health officer, a public health nurse and a clerk with salaries for such whole time, county and municipal officer of $2,000 to $6,000 a year, and to be paid from local funds. In my opinion the general adoption of some such plan would be a step, not only in the right direction but productive of benefits hitherto unrealized in the field of preventive medicine. I would go further and assert with confidence that some such innovation is an essential prerequisite to any marked progress in securing the advantages in community health and happiness that our scientific knowledge warrants us in aspiring to immediately, and is also unquestionably demanded if our responsibility as health officials is to receive the recognition it deserves, and be associated less in the public mind as a popular text for semi-pro articles in the daily press, or flashy outbursts in the monthly magazines, rather than a vital force in the daily life and habits of the people.

It is true that in our larger centres of population there has been remarkable progress during recent years in the adoption of scientific methods, particularly in the practical application of laboratory findings to the routine departmental work. In many of these centres we have full time health officers, full time bacteriologists, qualified food inspectors, and a corps of public health nurses; each division working in harmony with the others toward the prevention of preventable diseases. Even with such impressive equipment and elaborate machinery supported by annual appropriations by no means of trifling or insignificant proportions, can it be truthfully asserted that we are accomplishing more than lopping off the branches, rather than striking at the root of the giant ygdrasil under the protecting shade of which the forces of disease and death threaten continually the welfare and happiness of our people? The exanthematous diseases still kill their thousands; the great white plague its tens of thousands annually. Lest we forget, let us call to mind that within a period of less than four years, a devastating epidemic swept over this continent leaving in its wake a death toll of more than half a million souls and yet up to the present time there has been no drastic demand for such a reorganization of our health forces as shall prepare us to cope with a similar emergency or minimize the handicaps and unpreparedness of that trying period. The epidemic of infantile paralysis in 1910 lingers like a grim spectre in the public memory, haunting the minds of anxious mothers with the return of summer days, while the pathetic victims of its malevolence are daily to be seen on the streets and public places of every town and city.

In my own municipality largely through the efforts of a voluntary organization carrying on anti-tuberculosis work, the deaths from this disease have declined from 75 attributable to pulmonary and surgical types combined in a population of 60,000 persons during 1906, to 54 during 1920 in a population approximating closely 120,000, with slight fluctuations of favorable or unfavorable significance in the intervening periods. With the exception of the campaign being carried on in three or four cities, such as London, Toronto and Windsor, little attempt at intensive warfare is being waged against consumption.

With respect to diphtheria, an analysis of diphtheria death registrations in Ontario between the years 1880 and 1918, by Professor Fitzgerald, has shown that there has been a steady decline in death rate from this disease during these years. Although the population increased from 1,884,000 in 1880 to 2,800,000 in 1918, the deaths from diphtheria fell from 1,251 in 1880, to 335 in 1918. Notwithstanding this remarkable achievement, it is astonishing to note in the selfsame pamphlet that "there is a steadily increasing case incidence even though the case fatality rate has been diminishing and that this is in harmony with the facts observed in many other parts of the world." Dr. W. H. Park, director of the bureau of laboratories in the New York City Department of Health, states with respect to immunizing effect of toxin-antitoxin injections, that the duration of the immunity in at least 90 per cent.

of the children injected is for more than six years and probably for the remainder of life. Fifteen per cent. of the entire school population of that city have been immunized. In two years the mortality from diphtheria has fallen from 22 per 100,000 to 16 per 100,000. During the same years the mortality in the rest of the state has slightly increased. If encouraging results are to be anticipated from the use of this preventive measure why not a more immediate and general utilization of its benefits in the eradication of this menace to the lives of school children?

Time will not permit even a feeble attempt at enumeration of the fields of Public Health Endeavor in which by reason of insufficient funds and imperfect organization the urban M.O.H. is not permitted to engage except after a desultory fashion. The adequate housing of our artisan population is in its infancy. Our child welfare work is spasmodic and fragmentary; our school inspection imperfect; industrial hygiene, as yet not much beyond the stage of experimental research. We have scarcely done more than touch the fringe of the venereal disease dilemna. In the domain of mental hygiene, while the problems of delinquency, incorrigibility and criminality are receiving some attention, the question of how to increase the stock of the thrifty and capable and shift from their shoulders, the burden of the unenterprising rich and unenterprising poor is still in the novitiate stage.

If this is the state of affairs in our large cities, what shall be said of hygienic advancement in our smaller cities, towns and rural districts? In some of these, particularly in the rural districts, the last decade has witnessed a marked improvement in the sanitation of rural homes with regard to essential features, but in many sections the ear marks of progress are still sadly lacking. Respiratory infection from neglect of personal hygiene and circulatory disturbances from exposure and overwork are very prevalent. Small outbreaks of typhoid fever are still a frequent occurrence among our suburban populations, while towns and smaller cities in many instances require the constant supervision of the central authorities to ensure the purity of their water supply. It is stated by those in close touch with the tuberculosis problem, that this disease is surprisingly prevalent in our farming communities. It is only in the last two or three years, through the Bureau of Child Hygiene of the Provincial Board of Health, that active interest in the care of babies and the promotion of child welfare has been introduced in our towns and smaller cities. No cities of under 20,000 people employ a full time health officer. They can not afford to do so, primarily, from lack of funds. In populations of less than 15,000 persons, not to speak of towns, villages and rural municipalities, full time health officers, bacteriologists, milk and dairy inspectors are out of the question, because the expense of maintaining such a staff is prohibitive, and moreover, if finances were forthcoming for their employment, the work would be insufficient to occupy their undivided attention, with consequent waste of funds, dissatisfaction, criticism and disparagement of public health work.

My contention is that most of our difficulties in providing an adequate service, and one that would command more universal respect, is due to the fact that our unit of administration is too small. Given a population of from 25,000 to 50,000 persons—I leave aside the method of apportioning revenue to be raised as purely a matter of detail—we have first and most important to provide a full time health officer. This official, to be successful, must, as with any other vocation in life, be first intelligent and capable of doing this particular kind of work, and he must also be specially educated and trained for his work. The popular misconception that any graduate from a medical school is competent to assume the duties of health officer is responsible for many of our shortcomings in the practice of prevention medicine and is an obstacle to progress. Our universities are doing much to gradually eradicate this heresy. The scriptural implication that no man can serve two masters is fully exemplified in the attempt of the physician dependent on practice for a living, to discharge satisfactorily the duties of M.O.H. If he carries out the duties as a side issue to his daily routine, the importance of the work is discounted or degraded in the eyes of the public; if he is faithful and conscientious he makes enemies and injures his reputation. The full time health officer should above all things, be imbued with the idea that his work is a public necessity and a solemn trust. Talent, superabundant energy and diplomacy will not suffice if there is absence of this conviction. He ought to be held responsible for the public health of the community using the term in its broadest sense. I think the words "public health" convey a rather hazy and indefinite meaning to the man on the street, and if it were possible to rechristen our Health Departments into Departments of Preventive Medicine our prestige would be wonderfully enhanced.

Given a population such as I have mentioned merely by way of suggestion, for which a competent health officer has been provided and his tenure of office sufficiently secured, there should be an adequate revenue for the support of a health department organized to meet the special needs of the area it is intended to serve. A Commissioner, Board of Health or Governing Body of some political sort may be included but is not indispensable. An appointee of the Government answerable to the central authority as in the case of the District Officers and relying for criticism or reward on a body capable of judging intelligently, has advantages not to be ignored. There should be a well-equipped central building or office from which the direction of all the personnel should proceed. Call it a Health Department, Health Centre, Community Centre, Department of Preventive Medicine, as you please—names are immaterial, function of chief importance, and this should be the prevention of disease. A small but efficient laboratory is essential and cannot be dispensed with. The laboratory gives scientific direction and ensures the co-operation of the up-to-date practitioners of the district. An epidemiologist, public health nurses, sanitary inspectors, should be provided.

From such a centre as I have sketched in barest outline of which there should be sufficient number to permit of intensive work through the Province, could be administered every kind of preventive effort-control of communicable diseases, supervision of housing, food, water supplies, child welfare, sanitation of school buildings and supervision of school children, prenatal work, mental hygiene and the dissemination of suitable information of an educational character.

In sparsely settled districts where hospital facilities are not easily procurable the equipment of temporary hospitals might be undertaken under conditions of special stringency. Physical examination might be provided for those not well, but who do not consider themselves sick enough to go to bed or a hospital. Think of the inestimable advantage to the community from a financial viewpoint of enabling those in the ambulatory stages of disease to continue their accustomed calling, and to provide for themselves and their families, instead of breaking down prematurely, becoming objects for provision of hospital outlay, and frequently a burden to their friends. If treatment of disease is not attempted by the Health Department, except in cities where the control of municipal hospitals is placed within its jurisdiction, the sympathies of the medical profession will not be alienated. At the same time the private physician, will do well to fall in line with the growing sentiment, that prevention should occupy a more prominent position in the practice of his profession, for in the foundation of health centres, and the establishment of the various clinics in connection therewith, considerable aid will of necessity result to the private practitioner.

I cannot resist making reference here to the total inadequancy both as to quality and quantity of the research work being carried on in connection with our Departments of Health. Sir James McKenzie in his famous work on heart affections has pointed out the opportunities of the general practitioner to carry out real investigation. It seems to me that his observations apply with equal force in regard to communicable diseases and that, if the wealth of material in relation to the incidence of these diseases now being absolutely unutilized could be sifted and properly analyzed, progress in the control of these diseases would be greatly facilitated.

The place of the voluntary agency in relation to the official Health Officer, I shall not attempt to touch upon. The question has afforded material for very considerable discussion and is still in most communities an unsettled controversy. My personal opinion is that if it were possible to accomplish a consolidation of effort and uniformity of purpose among the voluntary associations of which the number tends constantly to increase, resulting in dissipation of time, energy and funds, on the part of persons drawn principally from the same stratum of society, so that the whole problem of disease prevention could be surveyed by them in its entirety and effort not exclusively focused on special and often narrow fields, the net gain to the cause of Public Health would be very considerable indeed. I see no reason why all of these separate societies should not be welded into a large amalgamated organization, and become an effective auxiliary to the efficient Health Department.

That the Health Officer should confine himself to the exercise of his powers as a police official, I do not believe for a moment. Like the pilgrim in Bunyan's famous allegory, so long as he is burdened with the weight of this delusion he flounders in the Slough of Despond. The more time he spends on understanding the temperament of his community, and educating them to accept compulsion, the less excuse he finds for the employment of his punitive authority. I agree with Dr. Herb. Sinclair, that "it would be as easy to enforce compulsory circumcision or infant baptism as to enforce compulsory vaccination, though you can make it a crime to buy a stamp, a newspaper or an ice cream soda on Sunday." "To hear people talking about police regulations," says Dr.

Hastings, in his epigrammatic manner, "Is like ministers talking hell fire."

Neither do I believe the organization of our work in Preventive Medicine should proceed along half-hearted or haphazard lines. The salvage of human life transcends in importance all other considerations in the conduct of human affairs. The words of the Chief Health Officer of the Province in his review of ten years progress will be a foreword for future generations: "It is the paramount duty of every Government to protect the health of its citizens. Prevention of disease is by far the greatest field of modern medicine. It is not only the most economical but the most reasonable, successful and satisfactory plan of procedure in respect to disease."

System of Follow Up Work for Tuberculosis*

By Miss Zada Keifer, *Supervisor, Hospital Extension and Tuberculosis Nursing Service, Department of Public Health, Toronto.*

TO understand the working of Toronto's Tuberculosis programme, it is necessary to know something of the general organization of the Division of Public Health Nursing in the Department of Public Health.

This is a municipal organization doing generalized Public Health Nursing for the City of Toronto. Some of the most prominent phases of the work are Prenatal, Child Welfare, School, Tuberculosis, Venereal Disease, health supervision of Licensed Baby and Maternity Homes, and Hospital Extension services, as well as many miscellaneous duties which come to the nurses in their capacity of city employees and much co-operative work demanded by various social agencies in the city.

The director of the division is responsible to the Medical Officer of Health for the conduct and efficiency of the Division. She has on her staff special supervisors who have been appointed to take charge of the various branches of the work. For purposes of administration the city has been divided into eight districts with a Superintendent in charge of each, having a staff of from ten to twelve nurses, according to the needs of her district. Each large district is again subdivided into small areas which are assigned to the individual nurse, who is responsible for every type of public health nursing services which may be required within her district.

In addition to the eight district offices there is a Central Office at the City Hall where the director and the special supervisors are located, also a group of twelve hospital extension nurses whose duties will be explained later.

The function of the special supervisor is that of formulating and standardizing the policies relating to her particular part of the work. She is also responsible for the education of the staff in her specialty and is expected to keep them posted as to developments elsewhere in her field of work.

The Hospital Extension service is composed of a group of twelve public health nurses attached to the various hospitals of the city.

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*Read at the Ottawa Congress on Tuberculosis, March 17th, 1922.

These nurses act as the connecting link between the hospital in-patient or out-patient department and the nurse in whose district the patient's home is located. Just here I would like to emphasize the fact that in the matter of visiting, no two nurses' work overlaps. Any visit to be made to the home is made by the nurse in whose area the home is situated. The hospital nurse attends all clinics and visits the city order patients on the wards—and from these sources refers to the public health nurse in the district from which they come, all cases requiring instruction and follow up,—on the other hand, asks for reports when she wishes to have information for the physician which will assist him in the diagnosis and treatment of the case. Special return report forms are used in the various clinics, which cover in detail the information required by the physician and we feel that much more satisfactory results are obtained by getting this information from a nurse who has likely known the home and has been the one to send the patient to clinic or has arranged for the admission to hospital.

Working closely with the public health nurses, and relieving them of the burden of arrangements for relief or for social case work which forms such a big part of the problem of rehabilitation with many of our patients, are the secretaries of the Neighborhood Workers' Association. This organization is composed of the various charitable and relief-giving agencies of the city, who several years ago banded themselves together in an effort to co-ordinate all social work and prevent much of the waste and overlapping then existing. The Association has appointed one or more paid secretaries in each of the eight public health districts and it is to them the nurse turns for any relief which may be needed for her patient or for service in other social difficulties.

Unfailing support and co-operation is also given the nurses by the various other divisions of the department with whom our work brings us in constant touch.

We now come to a description of the tuberculosis work as carried on under the department. The Supervisor of Tuberculosis is also Supervisor of Hospital Extension Service and the twelve public health nurses attached to that staff. This arrangement seemed a reasonable one because two of the twelve nurses were attached to the Sanatoria to which Toronto patients are sent and doing special work in connection with tuberculosis clinics which, with one exception, are all part of the hospitals' out-patient services.

There are in Toronto eight clinics for the diagnosis and treatment of tuberculosis. To enumerate—one children's clinic at the

Hospital for Sick Children; five clinics, one at each of the adult hospitals, Toronto General, St. Michael's Western, Grace, and Women's College; the clinic at Gage Institute and the D.S.C.R. clinic at Christie Street Hospital. A nurse from the Hospital Extension Staff attends every clinic for tuberculosis held in the city with the exception of the D.S.C.R. clinic, and from this clinic all positive cases are reported to the Supervisor of Tuberculosis and referred by her to the various districts for supervision of the contacts in the home.

As stated previously the Hospital Extension nurses are in the hospitals all day and attend all clinics as far as possible. The nurses have been assigned to the various hospitals according to the need, some hospitals having three, others two, others one, public health nurse. In the Tuberculosis or Chest Clinic—as in none of the general clinics—our nurse assumes charge. This right has been given her by the hospitals which have practically, if not actually, handed over to the Department of Public Health, the management of the Tuberculosis clinics. This is true even at the Toronto General Hospital where we have no other responsibilities in the outpatient department, as they have their own social service nurses who take care of all other clinics.

The Chest Clinic physicians have their own Association, known as the Associated Chest Clinics and have worked out a method of procedure and a standard classification for tuberculosis cases. With the public health nurses in all hospitals tuberculosis clinics working under one supervisor, the results should be satisfactory, at least from the point of view of co-ordination and standardization.

In discussing our tuberculosis work it is well to outline first the various methods by which we find our patients.

1. Our most important source of information should be the private physician. Last year there were 937 notifications sent in to the department. While this seems a large number, we find that of the 228 deaths from Tuberculosis occurring inside the city during 1921, 145 or 65 per cent. of them had not previously been reported to the department. Deaths in Sanatoria were not included, as practically all of these are necessarily reported when application for Sanatorium care is made. Of the 937 notifications received, 588 were sent in by private physicians and 349 from clinics. We do feel, however, that we are receiving better co-operation from the private physician, than formerly.

2. Our second important source of information is the Tuberculosis or Chest Clinic. It is a comparatively simple matter to see

that notifications are sent in for all hospital clinic patients on whom a diagnosis of Tuberculosis has been made, as the public health nurse is present and can see that it is done. At the Gage Institute clinic also the matter is simple as the best possible co-operation exists. One of the two nurses doing special work in tuberculosis attends these clinics and is therefore able to assist in linking up the work in the district with these clinics. At the D.S.C.R. clinic, Christie Street, we have no nurse, but here, too, we have worked out a system of co-operation that is fairly satisfactory to us by which they notify us, through the D.S.C.R. headquarters, of all open cases. While they do not expect us, nor do we desire, to take responsibility for the patient himself, we are in this way enabled to visit the contacts in the home and arrange for their examination and supervision. A report is sent to the D.S.C.R. every four months on all patients under observation, covering the physical and social conditions of the contacts and information as to the patient's condition at the last visit. Special reports are also sent in from time to time if such seems necessary.

When we take into consideration the fact that there were 599 clinics for tuberculosis held in 1921, not including the Gage Institute and D.S.C.R. clinics, and that they had a total attendance of 6,998, we realize that an immense amount of work is being covered. In December there were 1,228 cases under supervision of the pubilc health nurses. This figure does not include the contacts, for in our system of records these are classified with other medical cases and only as tuberculosis cases when a positive diagnosis has been made.

3 and 4. Applications for Sanitarium or hospital care at city expense brings another large number of patients to us, as do reports of positive sputum from the laboratories of the department. In both these cases, if no notification is received within a reasonable time from the attending physician, he is written to and asked to send in the usual notification.

5. Notices of deaths from tuberculosis are forwarded to the district offices so that the nurses may visit and arrange for examination of contacts, also for fumigation or cleaning as required.

6. In the public schools of the city every child is given a complete physical examination twice during his school life, in the first and fourth grades and may be seen at other times by the school medical officer, who visits the school at least once a week. In this way many suspect cases are found and referred to the private physician and by him frequently to the clinic for further diagnosis.

7. Many cases are also found in her district by the public health nurse, who has come to be recognized in the neighborhood as the one to whom every one tells their troubles. She may be visiting in the home for any of a great number of reasons and it is to her the worried mother will tell of the father's cough and loss of weight, the child who is listless and will not play, or her own cough that she can't seem to get rid of. Or, may be, it will be of a neighbor who should see a doctor but can't afford to go to one.

Whatever the source of our information all cases of tuberculosis coming to the attention of the department, are referred to the district in which the patient resides, and a record of all information given her is made by the nurse. Unless the doctor has advised to the contrary she visits in the home to make whatever arrangements are necessary so that the doctor's orders in regard to the patient may be carried out. She also endeavors to arrange for the examination of contacts.

If Sanatorium care is indicated the district nurse will advise as matter of routine, asks the district nurse to send her a detailed report on home conditions, if one has not already been sent in. This report includes living, working, and sleeping conditions, number and ages of children, financial resources, etc. The doctors have become accustomed to receiving this report and now insist on having it before making recommendations for treatment.

If Sanatorium care is indicated the district nurse will advise as to the clothing necessary, arrange for the care of children during the mother's absence, or for the support of the family in the event of its being the father and wage-earner who must go to the sanatorium. Difficult as it sometimes seems, all of these things are as a rule, satisfactorily accomplished through our co-operation with the social agencies more particularly with the Samaritan Club and the Heather Club Chapter of the I.O.D.E., whose function is to aid the needy tuberculosis patients or their families.

During the year 1921, about 700 city orders were issued for sanatorium care. The majority of these patients went to Muskoka Hospital for Consumptives at Gravenhurst, and Toronto Hospital for Consumptives at Weston; a few went to Queen Alexandra Sanatorium near London, Ont., and to St. Catharines Consumptive Sanatorium. This year we are also sending patients to Freeport.

Two of the nurses of the Hospital Extension Staff have been assigned to special work in connection with Tuberculosis. One nurse visits twice weekly at the Toronto Hospital for Consumptives, and the other goes to Muskoka during the first week of each month.

They interview all new patients who are being maintained there by the city, learning from them any need for adjustment of home conditions, or of other worries which may hinder treatment. To them the Superintendent turns when he wishes the patient transferred to some other institution for treatment which the Sanatorium does not provide, or for the necessary arrangement for homeless patients or deserted children who may be ready for discharge. These two nurses also visit the district offices weekly, talking over with the nurse the records of tuberculosis patients in her district, visiting with her on any difficult cases, and in a general way acting in an advisory capacity in problems arising out of cases under supervision.

At the request of the Associated Chest Clinicians, the department has prepared two forms as an aid in co-ordinating the work of the clinic and Sanatorium. The first of these forms is filled in by the physician at the clinic which the patient attends and forwarded through the Department to the Sanatorium. The form covers the diagnosis and classification, additional diagnosis, stage, anantomical and constitutional; febrile; maximum temperature, number of sputum tests and results; X-Ray findings; haemoptysis, and any other information which he can give.

On the discharge of all city order patients the superintendent of the Sanatorium has been asked to fill in and send to the department the second form. This gives in detail the address to which the patient is going, the date of discharge, address and date of admission; the dispensary or clinic at which previously treated, information as to condition during stay in Sanatorium, amount of exercise or work at time of discharge, reasons for discharge, and any recommendations which the superintendent may wish to make. Copies of this report are forwarded to the clinic or private physician who sent the patient to Sanatorium—also to the district nurse whose responsibility it is to see that patient returns to clinic or private physician for supervision. It is also her function to assist in making any adjustments in the home that will enable the patient to carry on as far as possible the Sanatorium routine.

Up to this point the discussion has been of the work that centres around the care and supervision of a tuberculous patient. This work is largely preventive as well as curative. There are other phases of the work that are more exclusively preventive in character and which are therefore of even more importance. Most of these are in relation to children and are closely associated with the chest clinic at the Hospital for Sick Children. This clinic is held once a week on Wednesdays with a clinic on Saturday morning for the examination of I. C. tests and of children proceeding to Preventorium who are admitted only through this clinic. During 1921 there were 3,430 attendances.

It is quite usual to have from 60 to 80 children attend the Wednesday clinic. The reports from the district nurse which are sent in on all new cases are of assistance to the physician in making recommendations for treatment or care. All children who are definitely tuberculous are referred to the Queen Mary Sanatorium at Weston, where there is accommodation for children of all ages.

For the child who needs careful supervision in order that the infection which he has received may not have a chance to develop into clinical tuberculosis, the physician may recommend treatment at the I.O.D.E. Preventorium—an institution in North Toronto which accommodates children from infancy to 14 years of age. In the summer months, they may be sent for a month or longer to the Heather Club Pavilion, which is located in the grounds of the summer home of the Children's Hospital at Centre Island.

Again, if the child's condition and home surroundings would indicate it, he may be referred for care in one of the five open-air classes which have been established in the public and separate schools and where there is an average daily attendance of 150 children. In the summer months the two Forest Schools have accommodated 200 children and this year High Park is doubling its capacity so that we will be able to send 300 children to these schools this summer.

Milk is being given out in 35 Toronto schools to 7,000 children. In 18 of the schools it is being given on a medical basis, four of these are separate schools. The total number of children receiving milk in this way being about 1,000. Children who are ten per cent. or more underweight and who have had remedial defects corrected are chosen by the school medical officer to receive half a pint of milk in the morning and afternoon. In the public schools the children pay what they can and the deficit is made up by the Home and School Council, and in the separate schools by the Separate School Board. In the majority of schools the distribution started in the middle of November; since that time 42 children have attained normal weight. In the remaining 17 schools the milk is given on a general distribution basis, that is, every child who has the money to pay for it can have it. 6,000 children are receiving milk in this way.

All school children are taught the simple rules of health in the classroom talks and Junior Health League classes conducted by the public health nurse and an effort is made to have at least one of the parents attend the physical examinations made by the school medical officer. At this time very good results are obtained by emphasizing the need for the correction of defects from which the child is suffering.

Through the medium of the monthly Bulletin of the Department, by special publications and newspaper articles, every effort is made to educate the people as to the benefits to be obtained from healthy living.

We believe, and who can deny, that a great deal has been done, that we have gone a long way in prevention of Tuberculosis. The tuberculosis death rate of Toronto citizens, including deaths in city and of Toronto patients in outside Sanatoria, has been practically reduced one-half in the last ten years; the actual figures being 124 per 100,000 of the population in 1911 and 65 in 1921, which is the lowest rate for any large city. But when we study an analysis which has just been made of the 228 deaths in Toronto in 1921, and find that 33 or 14.4% occurred among children under 10 years of age, we realize that we have yet a long way to go in saving the lives of other little ones, for we know now that all of these children could and should have been saved. It is only by the untiring efforts of all who are interested in this work and by the continued goodwill and support of the community at large that this can be accomplished.

Drosophilids in Milk

E. A. BRUCE, Agassiz, B.C.,

DROSOPHILIDS are small flies, commonly called Pomace, Vinegar, Fruit or Sour Flies, that seem to prefer decaying or fermenting fruits, etc., or sour substance. Their puparia resemble hay or grass seeds when seen adhering to the inside of a milk bottle. The duration of life for the genus *Drosophila* at living room temperature is given as being two days for the egg period, six for the larval, and five for the pupal. In view of the fact that they have only been reported twice as occurring in milk, their presence upon five occasions in bottles of milk in the City of Vancouver, B.C., is of interest. The only American record is by W. A. Riley in an article entitled "Drosophila in Bottled Certified Milk" in the *Seventeenth Report State Entomologist of Minnesota*, 1918, pp. 41-45. Riley states that the only other reference to this fly in public health literature is to be found in *Zeitschr. f. Fleish v. Milchhygiene*, 1913, vol. 23, pp. 252-253, by Otto Fettick, who considers that milk infected in this way "must be regarded as questionable from a hygienic point of view."

Late in September, 1920, a milk bottle was received from the Vancouver Health Department, this bottle contained eleven pupae that were quite firmly fixed to the glass; after being kept three days six small flies emerged. Flies and pupae were sent to Mr. R. C. Treherne of the Entomological Branch, who kindly identified them as belonging to the genus *Drosophila*. Later these were sent to Ottawa, but no report has yet been received as to their specific determination.

The pupae, so far as I was able to judge, corresponded with those described by Riley. The puparium is of a light straw colour, about 3 mm. in length by 0.8 mm. in width, strongly convex on the dorsal surface, but slightly so on the ventral surface. The pharangeal skeleton of the larvae is retained as a conspicuous black mass near the anterior end of the puparium. The dorse-cephalic region is flattened, and from it project two digitate pupal spiracles. The basal portion of these processes measures about 200 microns in length by 50 microns in width, and bears 11 filiform processes

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measuring up to 300 microns in length. These filiform processes were difficult to remove intact as they adhered strongly to the glass.

I am indebted to Mr. R. H. Meek, Chief Food Inspector for Vancouver, for the following particulars:

Case No. 1, *March,* 1919.

The first case of the kind occurred in some milk bottles which were being returned to the dairy from a summer residence on Burrard Inlet, and under a high power pocket lens were seen to contain the larvae of some insect. The bottles were usually left on the slip so that the daily boat could leave new milk and collect the empty bottles. It was thought that the particular bottles must have been left for a few days on the slip to permit the egg deposit (as at the time it was thought that they might be the larvae of a small black sand fly so numerous up the Inlet).

Case No. 2, *November,* 1919.

A report of peculiar conditions being noted in a milk bottle—no information obtainable as to where the bottle came from—the milk was mixed supply.

Case No. 3, *February,* 1920.

A complaint re insects in milk. General and specific inspection of dairy made. No apparent cause. Remained unsolved.

Case No. 4, *September,* 1920.

A complaint made by a lady that some hay seeds in the milk bottle were not inviting, and on inspection appeared to be the same larvae as in previous cases.

Case No. 5, *September,* 1920.

A business man of Vancouver, feeling very hostile (for he was feeding his infant child on milk as purchased from the dairy), placed the bottle in front of us and demanded to know what kind of milk was permitted to be sold in the city. Examination of the specks in the bottle gave the appearance of being similar to previous specimens we had seen, however, seeing that this was the fifth complaint we decided to appeal to your Department for help.

In this case the milk was delivered from the V—— Dairy, and was special milk bottled at the farm of J. M. S. Inspection of the dairy revealed nothing out of the ordinary.

Cases 3 and 5 were from the same dairy. Cases 1 and 5 were similar, insofar as surroundings were concerned, both coming from areas outside the city where the black fly was common, and in both cases the bottles were brought into the city from such areas. Cases 2, 3 and 4 could not be traced beyond the dairy. All the cases except one (No. 5) were seen in bottles containing pasteurized milk. All cases occurred in the spring and fall of the year.

None of the Vancouver dairies were handling Bulgarian culture, but two of them were manufacturing buttermilk by inoculating skimmed milk with a bacterial culture obtained from U. S. A. points.

Mr. Meek states that the pupae were usually observed to be in pairs and close together, and that the area within the bottle occupied by the pupae was that part just below the neck to within a couple of inches of the bottom, and within a given area of one side of the bottle.

The fact that pupae were usually found some distance from the bottom is suggestive of a small quantity of sour milk having been left in the bottle, on the other hand *Drosophilids* are strongly heliotropic and would not be likely to deposit eggs on the bottom of a bottle (unless lying on its side). The fact that these flies will follow the light when a bottle is turned around, explains why the pupae are generally found within a given area on one side. In Vancouver milk bottles are handled in such a manner that it seems remarkable that the pupae in question escaped destruction. In washing bottles an alkaline solution consisting of 10% by weight of "Wyandotte" soda is used; at one time it was found that the dairies were economizing on the soda that this practice was stopped. The bottles first enter a cold bath, then a warm bath, and thirdly a bath the temperature of which is 160 to 165 degrees F. They are then rinsed in hot water, and allowed to dry by the heat left in the glass, which is almost too hot to be borne by bare hands. The condition was combatted by a more careful inspection of dairies and by exercising greater care in watching the bottles before they were filled; the dairymen realizing that a repetition of the trouble might lead to unsought advertising via the courts.

No further reports as to the presence of *Drosophilids* in milk have been received.

The Ontario Health Officers' Association

IF ever there was a live conference held in Toronto it was the recent Annual Meeting of the Ontario Health Officers' Association. There is no longer any "valley of dry bones" in connection with that organization. It fairly bubbles out with enthusiasm and the health vista of the future is one of assurance, of confidence and of hope. It was a pleasure to attend the meetings and hear the discussions so ably presided over by Dr. W. J. Shaw of Clinton. Dr. Shaw has got the twentieth century viewpoint. He wants something done. He is not content with a mere rehash of foibles, failings and shortcomings in public health work. He insists on finding a solution. "I have heard this same list of adversities, of barriers to be crossed, for years and years. Nothing, or next to nothing has been done to remedy them, but now they must be remedied." That is the way to talk. When Medical Officers of Health say "must" they mean business, and they have the Public Health Act at their backs.

Dr. F. J. Farley, of Trenton, President of the Ontario Medical Association, delivered one of the most forceful addresses one could wish to hear. He maintained that the necessity for Public Health work was so obvious that public opinion should not tolerate any government in power that would not endorse and carry out a public health program that would tend to insure the happiness, health and welfare of the people.

Other important recommendations Dr. Farley made were the establishment of county laboratories for the country physicians, the appointment of properly trained, whole time county medical health officers, and community nurses.

Dr. Roberts, M.O.H., of Hamilton, advocated a similar scheme for health districts of from 20 to 25 thousand people.

Dr. J. A. Morgan, of Smith Township. Peterborough, gave an interesting paper on "How to Control Diphtheria in a small Country Village," stressing the fact that diphtheria is one of the chief causes of children's deaths in a community, and that the free use of swabs and antitoxin, coupled with the services of the community nurse are the best methods for its control.

A most interesting address on "Food Poisoning" was given by Dr. M. J. Rosenqu, Professor of Medicine and Hygiene of Harvard University, author of the standard text-book "Preventive Medicine and Hygiene"', and one of the most outstanding authorities on Public Health subjects on the continent.

Dr. H. W. Hill, of London, Ontario, gave an address on "Some Modern Fallacies" emphasizing the point that public health work is more concerned with the prevention of disease than its cure.

Dr. W. W. Lailey, of Toronto, read a paper on "Pre-natal Care."

Dr. C. J. O. Hastings, M.O.H., Toronto, gave an address on "More Efficient Care of Mothers, and Expectant Mothers before, during and after Confinement."

The morning session of the second day was entirely taken up with a discussion on milk and its prominence as a food indispensable both to the adult and the child.

According to Mr. E. H. Stonehouse, President of the National Dairy Council, who delivered the first address in the morning, on the subject of "How to Produce a Clean and Safe Milk Supply," some of the conditions throughout the province are very bad. "If I were dictator," Mr. Stonehouse declared, "I would pass a Dominion law to-morrow, if that were possible, for the compulsory pasteurization of milk in every city, town and village. When we reach the point after years of education, when we can get good, practically certified milk, then and then only can we dispense with pasteurization."

Dr. Roberts, Medical Officer of Health, of Hamilton, pleaded for the laboratory diagnosis of milk. Twenty-five per cent. of all the cases of surgical tuberculosis are caused from the bovine tubercular organisms that the human being obtains from milk," he said.

Mr. Alex. White, Chief Sanitary Inspector of the Province, advocated the appointment by the Government of three trained milk specialists who could approach the question from the dairymen's standpoint.

Several doctors and inspectors from various parts of the province, including Galt, Brantford and Ottawa, maintained that the most important question of all was the condition of the herds. One suggestion offered was that each municipality should have complete control of the milk supply.

"Municipal Control of Milk Supply" was the topic of an address by Dr. Grant Fleming, Deputy Medical Officer of Health, Toronto. The inspection of farms and the education of the farmers, having as inspectors veterinary graduates, and the inspection of all equipment used in producing and delivering the milk, and in the process of pasteurization were absolutely necessary according to Dr. Fleming.

Topics of a more general nature formed the program of the afternoon. Dr. Colin Campbell, of Toronto, gave some alarming statistics in regard to the frequency of "Squint" or cross-eye, among children. If taken in time, before the age of five or six years, there should be no difficulty in total cure. The trouble arose when a cure was attempted by a person other than one possessing general medical knowledge. In many cases, the doctor stated, children were apparently freed from the trouble, and the eye seemed perfectly normal, when as a matter of fact, the child would be almost entirely blind in the one eye.

"The pity is," he declared, "that all of it is preventible. No time should be lost in stopping the practice of having children under five years of age examined for glasses, by anyone other than a careful medical practitioner." Dr. Campbell suggested that the Health Officers' Association, as a body, endorse a resolution to that effect. It is expected that the committee will consider the matter and report to the Association at its next meeting.

A paper by Mr. F. A. Dallyn, C.E., on "Soil Pollution," in which the need of extreme care in the placing of a well was emphasized, and a description by Dr. P. O. Coulombe, M.O.H., of the work carried on by the Health Department in Sturgeon Falls, with which he is associated, concluded the conference.

The Venereal Disease Problem

BY DR. GORDON BATES.

VENEREAL diseases constitute the greatest single public health problem of modern times. Foul and sinister manifestations of our failure to attend to the organized study and care of our growing young people, their devastating influence is more marked than that of war itself. The product of social conditions which can be easily remedied if we would put first things first, these diseases are significant in that their end results are not only disability and death, but far reaching social results which affect social organization and human happiness in a way characteristic of no other diseases.

The fact that venereal diseases are an index of the immorality of a community, that they are the common result of a misdirection of the efforts of nature to ensure the carrying on of the race—the fact that with unerring precision their very existence points to widespread departure from the ideals which should actuate men and women in their responsibility to one another and in their joint responsibility to the race—this means that in attempting to solve the disease problem we must also tackle social organization as well. It is not enough to set up clinics for the cure of disease, important though that action is. The definite training of children not only that they may be an economic success but that they may be guided towards ideals which will mean a correct attitude towards life, and towards one another is necessary. This will mean in the long run not only citizens who are longer lived and who are free from disease but contented, happy units in a well balanced state.

Not only the hospital, the insane asylum and the cemetery are strewn with the debris of these terrible diseases, but in the domestic relations court, the divorce court and the jail we find significant and costly evidence of their far reaching results. To correct definite defects in our educational ideals and our educational system, to definitely improve our community organization at the same time as we attack the disease problem direct will mean success of an

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Read before the Hamilton Social Hygiene Council, February 2nd, 1922.

amazing character. In instituting reforms which in themselves are fundamental we will diminish disease and at the same time do much for the present happiness of young people as well as ensuring for the future, happiness which may be so marred if they be caught in the net in which so many of them will be enmeshed if present conditions continue.

Venereal Diseases are widespread and damaging. The British Royal Commission bringing in its report in 1916 stated that no less than 10 per cent. of the urban population of Great Britain was infected with syphilis alone and that Gonorrhoea is several times more prevalent than syphilis. The resulting disease problem was shown to be extremely costly. The results of the investigation carried out in Great Britain was found to be applicable to other countries, although the significance of the problem had not been noticed previously. This was very largely due to the fact that death from these diseases appeared in the Registrar General's Report as due to some end results which had appeared previously to be a disease in itself, not merely a late stage of Syphilis or Gonorrhoea.

The direct expense of venereal diseases to the community is enormous. One investigator states that general paralysis of the insane (a late stage of Syphilis) alone costs the United States $467,000,000 yearly. It is certainly true that Venereal Diseases provide the most startling example of the fact that wealthy men and governments expend millions of money annually for diseases which should never be permitted to exist. Much of the money expended on costly hospital wards should be expended in prevention. In Venereal Diseases we should attempt to get all cases developing under treatment as quickly as possible in order that cure may be effected quickly and spread prevented. Then we should attempt social organization on a large scale.

In the establishment of fifty Venereal Disease Clinics in Canada and in the passing of the legislation compelling treatment Dominion and Provincial Governments are doing a great deal. What is badly needed, however, is the growth of a great popular social hygiene movement—in the direction of studying, preaching and establishing a more normal environment, particularly for young people.

The Canadian National Council for Combating Venereal Diseases is the voluntary organization entrusted with the organization of this work. The name of this organization will be changed to Canadian Social Hygiene Council to bring it into line with a similar change already made by many of the Council's' branches and an energetic campaign entered into in all parts of the country in an endeavor to correct certain specific defects as rapidly as possible.

There are two major Venereal Diseases, Gonorrohoea and Syphilis, in addition to the minor local disease, Chancroid. It is supposed that Gonorrohoea has existed for several thousand years. In the Brugsch papyrus attributed to the year 1350 B.C., according to Stokes, there appear among the remnants of an Egyptian system of medical practice reference to symptoms and treatment which would seem almost certainly to apply to Gonorrhoea. References to a disease which was probably Gonorrhoea appear in many historical documents and in the Bible.

Syphilis, on the other hand, is generally believed to have sprung to light in comparatively modern times and the idea that it first appeared in Europe in 1493, having been brought back from Hayti by the soldiers of Columbus is commonly accepted. Whether this is true or not, certainly shortly after this time it took on the characteristics of an epidemic in Europe. Starting in Spain it became known as Spanish Disease—then appearing in France, it assumed the name of French Pox. Carried to Italy by the armies of Charles IX., it became known as Neapolitan Disease, while in England, after its spread to that country, it was spoken of as Great-pox in contradistinction to small-pox.

In the late 18th century the famous John Hunter inoculated himself with pus from a patient with Gonorrhoea. The patient, unfortunately, also had Syphilis, and the investigator developed Syphilis as a result of his experiment. He thus came to believe the two diseases to be identical, and because of the weight which his opinion carried, this continued to be generally believed until further investigation toward the end of the 18th century cleared the matter up. The next outstanding discovery in connection with Gonorrhoea was the identification of the gonococcus, the true cause of Gonorrhoea, by Neisser in 1879.

Outstanding events in the development of our knowledge of Syphilis have been the discovery of the "spirochaeta pallida" the cause of Syphilis by Schaudinn in 1905, the development of the complement fixation reaction by Bordet and Gengou, followed by the Wassermann reaction for the diagnosis of Syphilis by Wassermann in 1904, and finally, the discovery of Salvarsan or "606" by Ehrlich and Hata.

The enlistment of public interest and government support of treatment and prevention have rapidly followed investigations carried out in various parts of the world. An epochal event was the

Report of the British Royal Commission brought out in 1916, while the information brought to light as a result of the war and routine examination of soldiers in the army were equally important in that they revealed an enormous amount of Venereal Disease, most of which had been contracted while the soldiers were still civilians.

In Canada as a result of advancing public opinion stimulation of the work of several voluntary committees, particularly the Advisory Committee on Venereal Diseases of Military District No. 2, the Dominion Government in 1919 called a conference of persons from all over Canada to discuss plans for fighting Venereal Diseases. As a result of this meeting the Government decided to subsidize the provinces to the extent of $200,000. This subsidy has been met by an equal contribution on the part of the provinces so that in the first year of the campaign against Venereal Diseases $400,000 was spent. Venereal Disease clinics have been organized in practically all of the provinces, and thousands of patients have been brought under treatment.

At the Ottawa Conference another important step was the formation of the Canadian National Council for Combating Venereal Diseases, a voluntary organization with branches in all of the provinces and a number of cities, whose purpose is to assist the Government by organized propaganda and education as well as by undertaking pioneer work in the direction of investigation and solution of fundamental allied social problems.

DISTRIBUTION.

Venereal Diseases are practically world-wide in their distribution, and although it is supposed that in cities they are more prevalent, they are found in every part of the community. In an investigation of 386 cases carried out in Toronto in 1917 it was found that the sources of infection were not only in all parts of the continent but came from foreign countries as well. Many of the cases originated in rural parts of Ontario. They were cases from most of the Canadian Provinces, from many states of the United States and from Europe, Africa and South America. As follows:—

England	13	Hamilton	17
Scotland	1	Brantford	3
France	1	Owen Sound	2
Toronto	199	Grimsby	3

St. Catharines	4	Detroit	7
Angus	2	S. Newark, Conn.	1
Sault Ste. Marie	2	Newark	2
Barrie	3	Cleveland	2
London	3	Memphis, Tenn.	2
Lindsay	1	Emporium, Tenn.	1
Lisle	1	Waterbury, Conn.	1
Belleville	1	Pittsburg	2
St. Thomas	1	Philadelphia	1
Midland	1	Indiana	1
Kitchener	1	Penn Grove, N.J.	1
Orillia	1	S. Carolina	1
Whitby	1	Houston, Texas	1
Dunnville	1	San Antonia	5
Coldwater	1	Trenton, N.J.	1
Rama	1	Boston	3
Windsor	1	Chester, Pa.	2
Southville	1	California	1
York Mills	1	Texas	1
Dundas	1	Kincardine	1
Burlington	1	Montreal	14
Quebec	1	Vancouver	3
Winnipeg	6	Halifax	4
St. John, N.B.	1	Hull, P.Q.	2
New York State	1	Sherbrooke	2
Buffalo	14	Ft. Lawson, Texas	1
New York	11	Cuba	1
Chicago	10	Rio de Janeiro	1
Milwaukee	1	Jamaica	1
United States	1	Cape Town, S. A.	1
American Sault	2	Aleandria, E.	1

Ontario	256
Other parts of Canada	33
British Isles	15
United States	77
Other countries	5
	386

Economic and Social Results.

"Most of the evidence bearing upon the economic cost of Syphilis is buried among the statistics of insane hospitals and pauper institutions. Only occasional glimpses can be had, which indicate the enormous wastage which they cause. Williams estimated, it will be recalled, that ten men insane from Syphilis represented a net loss of life expectancy of $212,248 in earning capacity, and a cost to the State of Massachusetts of $39,312. According to the census of 1910 there were 180,000 insane persons in the United States. Estimating 12 per cent. of insanity to be due to Syphilis and the experience of Massachusetts to be applicaple to the country as a whole, the economic loss in earning capacity and cost of care on the score of a single item in the total bill of only of the genital infections, would approimate $467,000,000. If paresis, a relatively uncommon complication of Syphilis, can alone cost more than half a billion dollars, the cost of illness and death from other and equally grave complications, such as heart and kidney diseases, blindness, deafness, paralysis due to nervous change, when added altogether, will total figures that take rank beside the stupendous costs of war. There are estimates of the cost of consequences. The wastage of money spent on ineffective treatment, on the maintenance of hospitals and dispensaries, on medical fees, and through reduction of efficiency without absolute crippling and death, is beyond the reach of comprehension."*

The cost of caring for the end-results of Gonorrhoea is also very great; an outstanding example of this is the tremendous number of gynaecological operations upon women for ailments which are late complications of Gonorrhoeal infections.

SOCIAL RESULTS.

The results of Venereal Disease from a social point of view are also an outstanding part of the problem. One may take as example General Paralysis of the Insane. This disease caused by Syphilis is a form of insanity which is loathsome in character and practically always fatal. It commonly comes on in males at about the age of forty. The patient is frequently a married man with a wife and family. These left behind may themselves be infected and below par mentally and physically. Often they, too, become charges on the community. Delinquency and crime, as well as dependency result, and in this way the Government pays the second time unnecessarily for the upkeep of the police court, the jail and the reformatory. Stokes in "Today's' World Problem of Disease Prevention" quotes Williams, who states, for example, that in an investigation of 100 men dying in Massachusetts of Syphilis insanity. 78 women and 109 children were thrown upon society without the protection of a wage earner.

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*Stokes' "To-day's World Problem in Disease Prevention."

Syphilis is said to cut short the duration of life about one-third. This elimination from the community of a large number of persons who would otherwise continue to be producers for a number of years provides a serious economic and social problem both for the State and the dependents and relatives of those who die.

The fact that Syphilis and Gonorrhoea are the greatest human sterilizers both in the male and the female has a serious result in the birth rate. Dr. Salebee, the well known English Eugenist, has stated recently that Syphilis is the greatest single cause of infant mortality and certainly the enormous number of miscarriages, still births and infant deaths arising from syphilitic infection in parents should be a potent factor in arousing public opinion in the direction of a campaign of prevention. The relation between such a campaign and a child welfare campaign, including an agitation for the establishment of pre-natal clinics where pregnant mothers may be examined and cared for, is sufficiently obvious.

THE SOCIAL BACKGROUND.

While it is true that an enormous amount of Venereal Disease is acquired innocently, particularly by the blameless wife and child, it is also true that the social phenomenon of prostitution and the existence of illicit sexual intercourse are very largely responsible for the existence of Venereal Diesases in the community at large. A study of this part of the problem is essential if any adequate measures are to be worked out for the ultimate control of conditions as they are at present.

In Europe and in other parts of this continent the Red Light District, a section of the community in which prostitutes are segregated with the tacit consent of the community and sometimes legal sanction, constitutes a definite problem, while in all parts of the world the problem of the clandestine prostitute and of widespread immorality on the part of individuals of both sexes is a matter which must be studied and dealt with. It is still believed by many persons that the only method of controlling vice and resultant Venereal Disease is by the establishment of a district for prostitutes. A medical examination of the prostitutes is supposed to be sufficient to insure the safety of their patrons. This theory is not now believed in or approved of by workers in the social hygiene field. It is believed that the segregated district is a direct encouragement for immorality, that it lowers the moral tone of a community and of the members of the community, and that it increases the number of exposures to infections. It does not cut down the amount of clandestine prostitution in the surrounding community as has been argued, but increased it. The women in such a district are not free from infection and the medical examinations which are conducted from time to time are always a farce. Such women always become infected with Syphilis or Gonorrhoea sooner or later, and are notorious conveyors of disease. Repeated surveys of the situation in various cities have proven this fact again and again. Papee showed that 30 per cent. of the prostitutes in a typical city (Lemberg) were in the first to third year of a syphilitic infection—that is the most contagious period. Similar surveys in American cities have had a like result.

In a typical Canadian reformatory for women examination showed that about 33 per cent. had Syphilis and 80 per cent. Gonorrhoea. These women were largely of the prostitute class.

The situation in Canada as regards prostitution differs in various parts of the country. Not long ago there were some Red Light Districts in the West. There is still some public opinion in favor of the establishment of such districts as a preventive measure. In Montreal there is still an extensive and notorious vice district, perhaps the worst, still remaining on the continent. In the United States, during the war, a determined effort was made to wipe out all such districts, and as a result nearly three hundred were put out of commission.

Side by side with the problem of the commercialized and regulated prostitute there is always that of the clandestine who may or may not be paid. As I have already suggested the presence of a vice district usually means the number of clandestines is increased, not decreased.

The situation in Toronto is probably applicable to most Canadian cities. Here the police have adopted a policy of repression, with the result that we have to deal almost altogether with the problems of clandestine immorality. The method of investigation by means of the social case sheet has been of great value in revealing social conditions surrounding Venereal infections in this city.

In one investigation carried on among army patients in Toronto 417 men were closely questioned with the following results:—

36 men were married.
263 men were single.
70 were under twenty.

144 were between twenty and twenty-five.
31 were over thirty.

Of the women who had been sources of infection:
213 were single.
27 were married.
10 widowed.
2 were divorced.

As to age:
45 were over 25.
32 were under 18.
29 were 18.
268 were between 18 and 25.

PAYMENT.

127 of these women were not paid.
151 men had money payments varying from 75c. to $15, $2.00 usually.
55 men provided a meal.
5 made presents of clothing or other articles.
Others provided entertainment at a movie or a theatre.
The automobile was frequently an auxiliary factor.

Quite commonly the infected man met the girl accidentally, had never seen her before and never saw her again.

SOCIAL CONDITION AND OCCUPATION OF WOMEN.

44 women were definitely classified as prostitutes, often living in houses of prostitution. This condition of affairs was confined to certain cities. In Montreal this was usually the case. In three cases it was true of Toronto, and in one of Hamilton.
12 were munition workers.
9 were factory workers.
13 were stenographers or clerks.
41 were domestics or waitresses.

Other gainful occupations were boarding-house keepers, actresses, salesladies, theatre ushers, cabaret singers, mica splitter, manicurist, bookkeeper. It was found in a later investigation of 1,000 cases that alcohol seemed to be one of the casual factors.

PLACES OF INFECTION.

Men were questioned as to where infection had taken place.

Aside from cases in which infection took place in disorderly houses, facts were ascertained which seemed to point to the necessity for supervision of boarding-houses and hotels.

In 60 cases infection took place in the girl's own boarding-house.

In 21 cases in a hotel where the couple registered as man and wife.

In 38 cases they went to strange boarding-houses, obtained rooms and stayed for a few hours.

A large number of infections took place in the city parks. 21 in High Park and 11 in Queen's Park alone.

The above statistics are of interest in that they reveal conditions and point to the desirability of certain definite reforms.

Among women who can be definitely classed as prostitutes undoubtedly a large portion are feeble-minded. Indeed estimates as high as 60 per cent. have been made. Although the majority of immoral persons are not feeble-minded the feeble-minded prostitute is so dangerous a type, so devoid of responsibility and such a spreader of disease that she constitutes an important part of the general social hygiene question. This type of prostitute should be dealt with rigorously.

A campaign against Venereal Diseases must be comprehensive in character and certain points must be borne in mind as to existing conditions.

These may be summarized as follows:—

1. There are a large number of infected and infective persons, a large proportion of them ignorant of their condition. These persons both for their own sakes and the sake of others whom they may infect should be educated and persuaded to take treatment.

2. The large proportion of the population is as yet uninfected. Many of them may become infected unless steps are taken. This resolves itself largely into a problem having to do with the care and education of young people.

Class 1—*Infected Individuals.*

(a) *Treatment.*

For the care of infected persons there are provided, first, the private physicians; secondly, the Government clinic. Clinics are now in operation in practically all of the provinces of Canada.

(b) *Education.*

Education for the benefit of infected persons has been undertaken by Governments in various provinces and by the Canadian

National Council for Combating Venereal Diseases. By the use of newspaper advertisements, moving-pictures, such as THE END OF THE ROAD, lectures given before various groups of the population and the distribution of literature, infected persons or persons who have exposed themselves to infection may be informed of the necessity for undertaking treatment at the earliest possible moment.

(c) *Value of Social Service Department.*

The Social Service Department of a Venereal Disease Clinic is extremely important and through this department the clinic may become a much more valuable unit in the general campaign against venereal disease. One of the useful functions of this department is education of the patient in order that he may see the importance of continuing his treatment and in order that he may not be a menace to other people. This may be accomplished in various ways. For instance, educational material in the form of pamphlets or cards should be placed in the hands of every patient. The matter of using good educational posters in clinics in also worthy of consideration.

Follow-up work in the cases of patients who neglect treatment is important. Patients may in some cases be persuaded to resume treatment by means of appropriate letters. In other cases it may be necessary to follow patients to their homes. The fact should be emphasized, however, that the better the educational work carried on in the clinic the less follow-up should be necessary. Where personal follow-up work is necessary, the greatest tact is desirable when questioning is necessary at a patient's own home. It is perhaps scarcely necessary to mention in passing the fact that a well organized card index system is essential if social service department is to keep track of patients visiting the clinic and of visits missed.

(d) *Value of the Social Case Sheet.*

The All-America Conference on Venereal Diseases held in Washington in December, 1920, passed certain resolutions as to the value of the social case sheet. These stated that information gathered by means of the social case sheet may be utilized for the following purposes:

(a) follow-up work.
(b) tracing source of infection.
(c) tracing contacts.
(d) estimating the value of educational methods in vogue as a part of the local campaign.

(e) demonstrating economic loss to various industrial and other units in the community.

(f) demonstrating the social needs of the community; e.g., recreational needs, adequate supply of supervised boarding-houses, improved industrial conditions, etc.

(g) demonstrating of distribution of infections.

(h) demonstrating type of prostitution, extent of solicitation, etc.

(i) demonstrating medical and social results of venereal diseases.

The above summary of types of information which may be gathered by means of the social case sheet gives one a fair conception of its value and it is important that in utilizing this document in investigating Venereal Disease cases the fact be borne in mind that the information obtained from each case is of definite value not only in so far as the case being investigated is concerned but for the community.

It is important that the name and address of the source of infection be obtained in order that steps may be taken to find that person and put him or her under treatment—using the legal machinery provided under legislation for the prevention of Venereal Diseases if necessary.

It is also important that any contacts or persons who may have been exposed to infection from the patient be discovered and their cases investigated. One should find out whether such person is actually infected. If infected they should be persuaded to take treatment. The social case sheet may also be used for investigation of various problems which have to do with Venereal Diseases. Through it one may find out, for instance, in what parts of the country a great deal of infection exists. One may investigate the relation of lack of recreation to immorality, one may estimate the amount of prostitution going on in a city, one may ascertain the existence of houses of prostitution or houses of assignation in a particular area or discover the necessity for better lighting in parks. As a matter of fact through the judicious use of the social case sheet one may arrive at a valuable conception of the problem of immorality, prostitution and Venereal Diseases in any community.

All of the above means that every venereal case should be investigated by means of the social case sheet and that in every investigation there be the utmost accuracy. Generally speaking a male physician should question male patients—the social worker female patients.

By the use of a similar type of investigation among individuals brought up in police courts or imprisoned in jails or reformatories for sex offences, one may arrive at an idea as to whether legislation is adequate and as to whether the idea of the legal authorities is merely punishment of the individual or prevention.

Class 2.—Non-Infected Section of the Population.

(a) *Education of Children.*

One of the great factors in producing the immorality which is at the back of the Venereal Disease problem is the fact that generally speaking children are allowed to grow up in absolute ignorance of matters of sex and as to the necessity for living a decent moral life. This is very largely due to the fact that parents are uneducated on these matters and unable to educate their children. It is not implied in advocating the teaching of the biology of sex that this alone will provide anything like an adequate protection of young people. It is necessary, however, that children be given some idea of the great purposes of nature and be taught a definite respect for the sex function. Part of such teaching should be definite instruction in citizenship and the stimulation of a spirit of chivalry and idealism which can easily be brought to the surface in any child by carefully planned educational measures.

The method by which such information should be given to children has long been a subject of controversy. It is now generally agreed that the parent is the proper person to teach children such matters. This has resulted in the adoption by the National Council for Combating Venereal Diseases in Great Britain of a plan for teaching classes of parents in schools in order that they in turn may undertake to teach their children. The moving-picture may be utilized for this purpose and there are already a number of useful films on the market. One entitled "HOW LIFE BEGINS," is very good. In imparting information to classes of parents it is important that if possible the general matter of the prevention of Venereal Diseases in its broader aspects as outlined below be brought to their attention with special reference to the supervision and general care of children as well as their education.

The desirability of normal healthy recreation for all children is a matter upon which special emphasis should be laid.

(*b*) *Adults.*

It is important that the adult population should have information on the Venereal Disease problem both on its seriousness and on methods which may be undertaken for preventing Venereal Diseases. Such education is important because it means the formation of public opinion and the public only arrive at a clear cut opinion when clear cut facts are placed before them.

THE DOUBLE STANDARD OF MORALITY.

It is an undoubted fact that society in the past has been prone to visit vengeance on the immoral woman and at the same time excuse moral lapses in the male. This means that condition of affairs has existed which is not only unfair but actually conducive to immorality. If sexual offences are wrong in woman they are equally wrong in man, and if punishment is to be meted out for such offences it should be shared by all offenders regardless of sex. The prostitute is frequently roughly treated by the legal authorities. The jail and reformatory are considered necessary for her reclamation. At the same time her male companion—equally guilty—goes free. The same condition obtains in the drawing-room. Too commonly the man of loose morals is welcomed as at least little worse than his fellow who has maintained the highest moral standard. At the same time the woman of easy virtue is shunned. All of this represents a state of opinion which is unhealthy and productive of very bad results. Until people generally come to believe in the single standard of morals progress towards the final elimination of Venereal Disease from the community will be seriously impeded.

One of the outstanding causes for the existence of immorality and Venereal Disease is late marriage. Marriage is commonly postponed because of economic and social conditions which would seem to make reasonably early marriage impossible. The public should be educated on this matter and the dangers of late marriage explained to them. The economic and social conditions which make for late marriage are definitely remediable. Only an educated public opinion will remedy them.

Another important cause of immorality is the lack of opportunity for healthy recreation. This applies to both children and adults. There would seem to be many possible methods by which existing conditions could be remedied. The schools are as a rule, for instance, not in use at night. Their utilization after school hours for dramatic entertainments, folk dancing, debates, etc., would be a means whereby children might be under supervision at a period of the day during which many of them may otherwise receive impressions of a dangerous character from associates of a type which are always too frequent. The utilization of church buildings for dancing by young people would mean that young people could indulge in a perfectly innocent and proper pastime under proper conditions. The general stimulation of all forms of outdoor recreation and sport is also important.

Side by side with problems involving the provision of more recreation is that of supervising existing forms of recreation. Undoubtedly the unsupervised dance hall is frequently a focus of immorality. This is not due to the fact that dancing is improper but to the fact that the dance hall is used for more than its legitimate purpose. If proper supervision is undertaken there is no reason why a dance hall should be used as a pick-up place nor is there any reason for improper types of dancing.

Housing conditions have a good deal to do with the existence of vice in any community. The crowding of several families into a house intended for one family produces conditions which do not make for normal family life nor for morality. Again lack of supervision of boarding-houses may result in dangerous developments. Unfortunately all boarding-house keepers are not scrupulous and the use of boarding-houses as houses of assignation is fairly common as a result. Licensing of boarding-houses on condition that they live up to certain requirements would be a valuable step in advance. One requirement should be the provision of a common room where roomers may receive their guests. The lack of such provision and the receiving of guests in bed-rooms is a frequent cause of trouble. In large boarding-houses for young men or young women definite provision should be made for recreational facilities and for proper entertainment for guests of both sexes.

In public discussion of the general subject it is necessary that great emphasis should be put on the function of the family as the most important social unit. If a member of a family breaks away from normal family associations and leaves home it is necessary that the community should recognize the fact that such person away from parental supervision and family care should have special attention on the part of the community. Such persons multiplied many times in the thousands of young people away from home in large cities make it necessary that we should pay special attention to all matters making for their welfare.

News Notes

Dr. J. S. W. McCullough and Dr. J. G. Fitzgerald, Toronto, are in England.

At the annual meeting of the Canadian National Council for Combating Venereal Diseases the old name was abandoned. The Council will in future be known as the "Canadian Social Hygiene Council." The new offices of the organization will be 207 York Building, King and York Streets, Toronto.

Dr. John T. Phair, of Toronto, Chief School Medical Officer under the Department of Education for the Province of Ontario, is the new Secretary of the Canadian Public Health Association.

It is a widely felt opinion that the annual meeting of the Canadian Public Health Association, held in St. John, was one of the most successful meetings ever held by the Association. The local committee had evidently paid a great deal of attention to initial organization work and hospitality on the part of the St. John Citizens was unbounded. A great deal of work was accomplished.

Mrs. Emmeline Pankhurst, during June and July, is touring Manitoba and Saskatchewan speaking on "Social Hygiene."

The Ontario Safety League have formed a "Safe Drivers' Club."

Dr. George D. Porter, Director of Health Services, University of Toronto, will represent the Canadian Association for the Prevention of Tuberculosis at the meeting in July, in Brussels, Belgium, of the International Union Against Tuberculosis.

A Round Table Conference on the Co-operation of Voluntary Agencies was held during the week of the Canadian Public Health

Association meeting in St. John, presided over by the Hon. Dr. Roberts. Dr. Roberts explained that the object of the meeting was to co-ordinate the work of various organizations and to attempt to make arrangements which would prevent the possibility of overlapping in time, energy and expense. Those present at the meeting representing organizations were: Canadian Red Cross Society, Col. Nasmith, C.M.G.; Victorian Order of Nurses, Miss Harry; Department of Health, Ottawa, Dr. Helen MacMurchy, and Dr. J. J. Heagerty; Canadian Medical Association, Dr. Hutchinson; Canadian Public Health Association, Committee on Policy; National Committee on Mental Hygiene, Dr. Hattie; National Council for Combating Venereal Diseases, Dr. Gordon Bates; Canadian Association for the Prevention of Tuberculosis, Sheriff Cook and Dr. Wodehouse; Provincial Medical Officers of Health, Nova Scotia, Dr. H. A. Chisholm; Alberta, Dr. Laidlaw; New Brunswick, Dr. G. G. Melvin; Ontario, Dr. R. R. McClenahan; Imperial Order Daughters of the Empire, Miss Liggett; Women's Institutes, Mrs. Harold Lawrence; Public Health Nurses, Miss H. T. Meiklejohn. A further announcement in reference to the work of this Round Table Conference will appear in an early number of the JOURNAL.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF APRIL, 1922.

Comparative Table.

	1922.		1921.	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Smallpox	79	0	382	2
Scarlet Fever	249	11	365	7
Diphtheria	308	27	409	34
Measles	1266	8	284	0
Whooping Cough	69	8	165	16
Typhoid	13	7	32	5
Tuberculosis	207	135	196	121
Infantile Paralysis	1	1	....	....
Cerebro-Spinal Meningitis	9	8	7	6
Influenza	....	89	....	....
Influenzal Pneumonia	....	30	90	30
Primary Pneumonia	....	372	....	250
	2201	696	1930	471

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

Comparative Table.

	1922.	1921.
	Cases.	Cases.
Syphilis	194	219
Gonorrhoea	165	236
Chancroid	6	1
	365	456

MUNICIPALITIES REPORTING SMALLPOX.

Carleton	Ottawa	4
	Huntley	5
Essex	Colchester, N.	2
Grey	Shallow Lake	1
	Sullivan	1
	Sydenham	1
Lincoln	St. Catharines	1
	S. Grimsby	1
Simcoe	Collingwood	1
Stormont D.& Glengarry	Cornwall	1
Temiskaming	Bucke	2
Thunder Bay	Shrieber	1
Waterloo	Kitchener	7
	Waterloo Tp.	1
Welland	Niagara Falls	11
	Chippawa	1
York	Toronto	35
	Newmarket	3
		79

The returns made of communicable diseases by Local Boards of Health for April show smallpox, scarlet fever, diphtheria and whooping cough are much less prevalent than in the corresponding month of 1921. The only epidemic is in measles and is confined chiefly to Toronto, where some 700 cases are reported out of 1,266 for the Province.

It will be noticed influenza and pneumonia caused more deaths than in 1921.

Editorial

PUBLIC HEALTH AND PUBLIC OPINION.

WE live in an age of miracles. The automobile, the flying machine, the wireless, telephone, the phonograph, moving pictures, all would have been looked upon as "black magic" only a few generations ago. Now they are the commonplaces of our every day existence. With the luxuries and amenities has come also a security from illness which our forefathers knew not. Typhoid seems almost a thing of the past; diphtheria is now a problem depending for its solution not on the finding of a new remedy, but on the more careful organizing of methods available Tuberculosis diminishes. Infantile diseases are vigorously fought—Venereal Diseases are at least recognized—and in many parts of the world stories are written of other diseases gradually being eliminated from the scheme of things.

The millionaire brusque and business like bustles in with his money bags. His heart wrung with anguish—or perhaps his vanity or his conscience stung—he piles his money bags on the counter and sees lofty monuments to his benevolence rise. Clean wards—white uniforms—long rows of beds appear. He lifts his hat and retires, his fancy and his conscience both appeased.

And yet—and yet. Still the pestle and mortar are busily plied. Still the patent medicine manufacturer peddles his fatuous wares. Still even with the physician too often the ideals of a century ago persist. Hospitals increase in number that the ailing may be succoured. Blind pity and stupid charity hand in hand stand weeping, their doles in their poor hands.

And yet—and yet. The wards are full, and the toll of the dying is high. They die in comfort often—Thank God—but too early and too often. Ay, there is the rub, too early and too often still. And what shall we do about it?

Stand blinking! accepting calamity as fate and disaster as the dispensation of providence—or be about our business that life and happiness may be the lot of the many instead of the few and that the everlasting weeping of Rachael for her children may cease. No dream is that but a glorious and certain achievement of the future if we the people but will it.

But if the ideals of the past are to be replaced by a loftier sort knowledge must be broadcasted, not stored forever in the brains of brooding specialists. Let public health assume the place it deserves as first and foremost in the minds and hearts of public spirited men and women. Even millionaires, who after all are generally only particularly wise in the field in which they have succeeded—must learn from specialists how to spend the money they have made to the best advantage. Newspapers must learn to discriminate between sanity and insanity in the public health field and politicians must learn that the furthering of the health and welfare of the average man is a statesman's first duty, a duty which implies that saving the lives of children is a more important thing than the building of a dry dock or promoting the breeding of hogs or race horses, or even building a transcontinental railway. All of which achieved will make a long story. And the achieving thereof, withal, will mean a longer story still of new public health methods and new get together methods and a confiding in the public and an advertising of public health wares which have been unknown in the dim and unhealthy past.

MORE CO-OPERATION.

IN a later issue will appear resolutions passed by the Annual Meeting of the Canadian Public Health Association and by a Round-table of the various voluntary organizations dealing with the desirability of forming an Advisory Council to co-ordinate the work of the various nationally organized agencies engaged chiefly in public health work in Canada. It seemed to be the general feeling of the St. John meeting that public health interests would be furthered by some such definite step which would prevent overlapping and give the various associations the opportunity of consulting with one another in order to stimulate general public health activities more effectively.

The necessity for such a step in districts in which some particular phase or various phases of public health work may otherwise be neglected is obvious. The exact method of going about the process of co-ordination, however, is a little more difficult and will require considerable attention from the committee appointed to put the proposals of the St. John Meeting into effect. One suggestion brought forward was to the effect that voluntary agencies might pool their financial interests. The value of such a step at the present time is questionable. It would seem that the various voluntary organizations have active supporters who generally have a special interest in a particular organization which they may have been backing for a long time. That citizens whose interest in public health over a period of years has been an interest directed along a special channel would be willing to at once transfer their enthusiasm to all phases of public health is doubtful, desirable though such a change of interest might be.

The main principle brought forward that in unity lies strength, however, is and always will be correct. It is to be hoped that the initial steps taken in St. John will result in some measure which will tend to something more closely approaching unity in public health ranks in Canada and the placing before the public of public health as the greatest interest rather than a minor interest for the state and the average citizen.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society

School Health Supervision.

Dr. Josephine Baker shows that most physical defects in school children can be found during the eight to ten-year period. A thorough physical examination early in school life, followed by the correction of any physical defects, should make unnecessary the yearly repetition of a complete physical examination. The author believes that routine health inspection and annual tests for defective vision offer adequate health supervision after the first complete physical examination. ("American Journal of Public Health," June, 1922, page 465.)

Health Work in the Schools.

Dr. Thomas D. Wood outlines a scheme of effective work for the health of school children. ("The Journal of the National Education Association," May, 1922, page 177).

Diphtheria Prevention Work.

By Abraham Zingher, M.D., Assistant Director, Research Laboratory, Department of Health, New York City. An account of the diphtheria prevention work in the schools of New York City. The Schick test has been applied to a large number of school children, and the author reports some interesting observations from the tests in regard to the susceptibility of children of different classes and nationalities. ("Mother and Child," May, 1922, page 207.)

City Health Practice.

A report issued by the American Public Health Association on municipal health department administration in eighty-three first-class cities of the United States.

Rural Health Administration.

Report of the Committee on Rural Health Administration of the American Public Health Association. ("American Journal of Public Health," April, 1922, page 316.)

Health of Rural School Children.

Suggestions for improving the function of the rural school health programme by enlisting the co-operation of trustees, teachers, parents, school doctors and school nurses. ("The Public Health Nurse," March, 1922, page 145.)

The Health Plan for Maine.

The official and voluntary organizations interested in public health in Maine have united to carry out a health plan to place a public health nurse in every community to teach every school child the practice of health habits, and to combat preventable diseases." ("The Nation's Health," May 15th, 1922, page 255.)

The Isolation Hospital in Preventive Medicine.

The Medical Officer of Health of Jarrow, England, reviews the present position of the isolation hospital in the control of communicable diseases. ("Public Health, S. M. O. H." May, 1922, page 222.)

Industrial Colonies for the Consumptive.

In a lecture before the Royal Institute of Public Health, the Medical Director of the Cambridgeshire Tuberculosis Colony, describes the general scheme of industrial colonies and village settlements for the consumptive. ("The Journal of State Medicine," May, 1922, page 185.)

Health Plays.

A series of health plays for teachers and pupils, by Honora Costigan, Director, Education Division, Minnesota Public Health Association.

The A. B. C. of Nutrition.

By Mary E. Sweeny, Dean of Home Economics, Michigan Agricultural College. ("Public Health," The Michigan Department of Health, May, 1922, page 575.)

Malnutrition and the Scales.

A protest against over emphasis of the child's weight in relation to height and age in estimating nutrition. ("Public Health," Michigan Department of Health, May, 1922, page 594.)

The Child, the Scales and the Tape Measure.

A discussion of the value of the weight of a child as a practical index of health. ("The Outlook," May 10th, 1922, page 67.)

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Municipal Control of Milk Supply

BY DR. A. GRANT FLEMING, *Deputy Officer of Health of Toronto.*

IN writing this paper, I have had in mind that it might be helpful to others in their efforts to secure a pure safe milk supply, if I outlined the methods that have been found most practical in securing results in this particular piece of work in Toronto. It is somewhat difficult to state the effect of any one part of the whole effort, but in the course of months one does get the impression that certain parts, in comparison with the rest, considering the time spent and the cost, do give better results than others. It might well be mentioned at the outset, that it is necessary to change methods, that while one type of attack gives good results for a time, and up to a certain point, it then must be discarded in favour of some other mode of approach. Also, it is of course, appreciated in this work, as in all others, that different people are best approached in different ways. While the vast majority will meet you half way, and quickly realize that what you wish them to do, is for their own, as well as for the general good, there are a few who only recognize one power, and that is the law.

The milk problem brings you into touch with three classes of people; producer, distributor, and consumer. They must all be educated to do their part, if the best result is to be obtained, and the result which is aimed at is clean unadulterated milk from healthy cows, pasteurized, and then kept clean and cold in the home until used.

As in other problems it is well to begin at the beginning, and in this case we start on the farm. The Ontario Milk Act places on each municipality the responsibility for having an unsatisfactory or dangerous milk supply. It does so by giving the municipality power to pass a by-law to protect its milk supply, and if any municipality does not do so, the responsibility rests solely on that municipality. The Milk Act, on which the by-law is based, appreciates the need of inspection at the source on the farm, and in this particular work, the municipality is given power to send its inspectors to work with authority outside of its own borders.

The work on the farm is in two parts; the education of the farmer to use ordinary cleanliness in regards to milking, and to provide facilities for chilling the milk as soon as milked. An elaborate barn is not a necessary part in the production of clean milk. A man that keeps his hands clean, his cows groomed, wipes off the udders before milking, milks into a small mouthed pail, can produce milk that comes up to the standard of certified milk, in regards to cleanliness or bacterial count.

Our experience has shown the advisability of having a graduate of a veterinary college to do the work of dairy farm inspection, the reason being that he can soon become the friend of the farmer, giving him valuable and intelligent advice about his cattle. This has been proven in many instances when a farmer, who has been stopped from shipping his milk because it has been found dirty or below standard, has called at the department, he has expressed more anxiety over what the inspector of his farm will think of him for falling down, than over the loss of money resulting from his milk being excluded from the municipality.

We have found to convince the farmer that he is producing dirty milk, there is nothing that compares with the sediment disc. Bacterial counts mean nothing to him, but a disc showing the black of the mud, or the yellow stain of dissolved cow manure with pieces of straw, is something that he can see and appreciate; as a matter of fact this is often the first convincing evidence he has had, that he is not producing a clean milk. The disc can be kept, a point which is important, for when the farm inspector goes out, he can take the discs for the farms to which he is going, to show the farmer the gross dirt in his milk, or on the contrary, as now happens in the majority of cases, to show him either the absence of gross dirt, or a great improvement over former ones. Do not forget that a word of encouragement is of great value, when deserved, in securing real co-operation. There is no hope of having a sufficient staff to examine every day all the milk coming into the municipality, and unless the farmer is persuaded of his duty, and wants to produce the desired clean milk, the inspector has failed. The few that cannot be taught—that being by nature dirty and so unfit to be in the milk business—these should not be allowed to ship milk, but should be permanently excluded. Farms should receive their first inspection, and the inspector be satisfied before the producer begins to ship milk to the municipality.

Here, let me say, that we have found it necessary to be careful in writing letters. Form letters are no longer used. Each letter is a personal one, and when we write to a farmer or dairyman concerning unsatisfactory conditions, we never threaten him with anything that we are not prepared to carry out. If the letter states that his supply will be excluded the next time his milk arrives dirty or below standard, then such is done. The result is that those we deal with appreciate that we are in earnest, and now upon receiving a warning letter, they, as a rule, get in touch with the Department to ask that the inspector call, to advise them how to correct matters. One man cut off in any district, is a warning to the whole district. We very seldom take cases to court for the exclusion of a man's supply when he transgresses the regulations, automatically imposes a fine on him, due to the loss of sale of his milk; and as all his neighbors very soon know, they are warned by his misfortune and we profit by it.

Inside of the municipality the milk on arrival is tested for gross dirt, and chemically for butter fat, etc. It need hardly be stated that while we want whole milk, and do not appreciate paying for water as milk, this is a very secondary matter compared to the cleanliness and safety of the milk.

Dairies must be properly constructed, and it is well to see all plans for new buildings and additions before they are started, for here the Department can be of help to the dairyman. It is not difficult, providing one has the money, to equip an ideal dairy, but it requires a great deal of work to keep it clean. Steam costs money, labour is expensive, and there is a natural tendency to cut expenses and increase profits. It is easy to let piping or machinery go without proper cleaning. There is only one way to meet the problem of keeping the dairy up to the mark, and that is by insisting on its being so at all times. Any dairyman who refuses to carry on properly can be dealt with by refusing to grant him a license until the Department of Public Health has issued a permit, and this power can be exercised to force out of the dairy business the man who is unfit to be in it, by that, I mean the man who is unable to appreciate the responsibility of his position in the community, as being either one of the real life savers or an ally of the man of death.

Believing as we do in pasteurization, because we realize that a very large percentage of dairy cattle are tuberculous, that many farmers are only comparatively clean milkers, and the dangers of contamination at any of the various points of handling, we must guard against the impression that it takes the place of other precautions.

To insure that the milk is raised to the proper temperature and held there for the correct length of time, a recording thermometer, placed on the pasteurizer, owned and controlled by the Department of Public Health, acts as a constant check. The honest dairyman welcomes such an instrument, as he can see for himself just what is happening and he in turn uses it to check his employees, for often the employee in the dairy is to blame, not the owner, when milk is not properly handled. As for the dishonest dairyman, the sooner he gets out of business the better for all concerned. The efficiency of the sterilization of cans and bottles is checked by bacterial counts on them. Both can be readily sterilized if sufficient steam is applied for a proper period of time. Unsterilized cans or bottles merely mean insufficient steam or too hurried work.

As it is what is delivered to the consumer as the final product, that is most important, samples should be regularly taken from the delivery wagons for testing.

The consumer must be educated to keep milk cold and protected from dirt from the time it is delivered.

To sum up, the essential points are:

Inspection of farms and education of farmers, having as the inspector a graduate of a veterinary college.

Testing for gross dirt by means of sediment discs.

Excluding the supply of those farmers, who after warning, ship dirty milk or milk below the legal standard of quality.

Inspection of dairy premises and machinery for cleanliness.

Recording thermometers owned by the Department of Public Health, on all pasteurizers.

Checking of the sterilization of cans and bottles by means of bacterial counts.

Samples taken from retail wagon to check the final product as delivered.

Education of consumer to protect milk in the home.

The Production of Clean Milk

BY E. H. STONEHOUSE, *President National Dairy Council of Canada.*

IN accepting your invitation to speak upon the subject of Milk Production, I do so with many misgivings. Yet, upon reviewing many of my experiences while engaged as a Municipal Milk Inspector, I have decided, wisely or unwisely, to tell you some of my experiences, some of my thoughts upon the question, and some definite conclusions I have formed.

Your Secretary, Dr. Middleton, in extending this invitation, pointed out that he wished me to deal with the Care of Herds, the General Sanitation of Cow Byres, together with the best methods used in producing good milk, as free as possible from dirt, which of course in connection with such a subject also means Germs. I am also informed that a separate paper is to be given on Pasteurization. I will therefore treat with the subject as if pasteurization were non-existent.

Let me begin by saying my study of the question convinces me that when we have outlined or perfected a system under which clean milk can be produced for a municipality of 5,000 people, we have a cure for our milk troubles which is Province wide. The question of dirty milk in cities such as Hamilton, Ottawa and Toronto is not nearly so acute. Large cities can afford to spend huge sums on supervision and as most things are available for cash, city milk departments are enjoying a measure of success not applicable to the rural or rural urban towns and villages. Let us see then, conditions as they exist in small centres and if we decide they are bad (even dangerous) let us try to form some plan by which matters may be improved without increasing the cost too much.

In discussing this question it is well to remember that in these days of extensive child welfare campaigns and the slogan that each school child should drink a pint of milk per day, that even we adults become irritated and indeed some of us even get angry, if the milkman has not yet arrived when we sit down to breakfast. Milk may be said to form part of every meal we eat, in some form or other. Therefore the extraordinary importance of milk as a food compels the careful consideration of everything concerning it, and any procedure which will enable or assist the valuable food to be consumed in a state of purity should be welcomed.

Generally speaking, the herds from which our supply is derived are of a mixed character, with cattle of the Holstein breed predominating largely by reason of this cow's well-known generous milk flow, although it may be said to contain slightly less fat content as compared with cattle of the Ayrshire or Jersey type.

In so far as I am aware, little Tuberculin testing is carried on, save possibly in the very large centres where some particular breeder with a hobby for thoroughbred stock raising, or some producer desires to place upon the market what is known to us as Certified Milk, and which as a rule costs just twice as much to the consumer as ordinary market milk.

I cannot say that dairy cattle suffer from any one particular disease more than another, unless it be tuberculosis of course and another form of Mamititis, or as it is called by the dairyman himself Garget, or inflammation of the udder. According to dairymen, Garget arises from a number of causes, such as one cow stepping upon the udder of another, or the udder becoming bruised and lacerated in any way, or by careless milkers neglecting to properly stripp at each milking. This latter is said to be one of the chief sources of the inflammation which of course is responsible for much of the bad odour and the frequently finding of pus in milk. (It should also be said of course that the feeding of certain roots, particularly turnips, just before milking is the reason given by many dairymen for strong odourous milk.

CARE OF DAIRY CATTLE.

It may be said that the dairyman gets in milk yield just in proportion to the care of his herd. If the cattle are badly housed, in a cold, damp, dark, dismal barn, and are not properly cleaned and fed regularly (particularly during winter), he must neither expect healthy animals nor an abundant supply of milk. Dairy cattle, and particularly those finely bred stock seem very responsive to kind treatment and good, well-balanced feeding. It should not be forgotten in these days when we hear so much about Vitamins and yet so little, that these accessory food factors are also necessary to animals and that when these are omitted or withheld nutritional disturbances develop which I feel sure would have some bearing upon the cows' ability to produce. Just what effect this might have upon the milk itself I am not prepared to say.

COW BYRES.

There are many different plans available after which dairy stables may be patterned. If one does not care to work out the details himself, he may secure a Book of Plans from almost any manufacturer of dairy equipment. Without doubt many of these plans are good. In these days of competition dairymen who have been fortunate and have achieved a measure of success have in some of the older parts of the Province set up what are known as Model Barns and which may be termed cow palaces. Possible, from a Public Health standpoint, the long single story structure having no loft above the cattle is the best (although the most costly to operate).

Throughout the Province there may be said to be *three* distinct classes of dairy barns in use: The Model Plants already referred to and operated by large dairy companies as show places; the Remodelled Barns which come into being usually after the passing of a Milk By-law creating certain standards, and in the third place in rural and rural urban territory the ordinary farmers Bank barn, conforming to no particular standard. These latter are of course much the more numerous throughout the Province.

Usually the Model barns, and very often the stables which have been remodelled, are equipped with concrete floors, steel stansions, either the individual water bowl or the watering trough fed by a pump and the height of water level regulated by a Babcock cistern, two square feet of window glass is the usual lighting requirements for each cow.

Ample roof ventilation should be provided, together with a flue conduct in the walls at a height of say three feet from the floor level as a fresh air inlet. It should here be noted that the absence of proper ventilation often causes the exhalation from cattle to lodge on the ceiling and walls during cold weather, returning again in the form of water during a thaw, and oftentimes finding its way into the milking pail, carrying with it considerable dirt from the ceiling, as well as from the animals themselves.

Hay and other fodder should not be stored over dairy cattle not even when tight lumber floors are used. The discharge of these foodstuffs from above into the mangers creates unnecessary dust, which is usually only partly cleaned up. In barns of this type, the opening and shutting of doors is sufficient to send clouds of fine dust flying hither and thither.

Care should be observed in seeing that the width of cow stand (that is the distance from stansion or tie chain to gutter, is right), otherwise the cattle are able to lie in manure droppings. Badly constructed, badly arranged cow stagings are responsible for much of our dirty milk. A cow, after becoming caked with manure which has dried, cannot be cleaned without the application of hot water. I am sure a visit to a herd of say twenty cattle in January would, without doubt, cause the large town consumer to wonder how clean milk could be drawn from such animals.

The dairy cow should be cleaned and curried with as much patience and care as is a prized race horse of an enthusiastic owner. The tail, flanks and udder should be clipped short to make grooming twice daily much easier.

I am a convert, when two rows of cows are kept, that cattle face each other, with a central feed passage between. Such an arrangement makes feeding easier and cheaper, and as your windows are in the side walls, you have the light on the business end of the cow.

There is a wide diversity of opinion as to the relative value of hand milking as opposed to the milking machine. As a matter of fact, my own conclusions are not very well grounded. I find, however, that in many instances when such machines have been purchased in other years they now hang upon the wall unused. I have questioned many dairymen upon the point. Some state that to remove strippings when a machine is used, the hand milker is necessary so that little saving is effected. Others state that too much care is necessary in order that the rubber tubing which acts as a conduit from the udder to the milk pail, be kept clean or a bacterial growth develops which tends to sour the milk rapidly, and as the cleansing of this rubber tubing cannot be entrusted to hired help he must needs do the job himself. He therefore claims that this is an added job to a man who already has too much to do. However, be this as it may, the milking machine is not widely used in rural or rural urban centres.

There are also many objections to be found with some methods of hand milking. We have the employee who proceeds with the milking attired in the same clothes in which he has cleaned the stables, fed the cows, etc. There is also what is known as the wet milker, the man who carries with him into the barn sufficient milk from a previous milking to be used as a primer, so to speak. Into this he proceeds to wash his hands, thus making the task of milking easier for this particular man. Wet milkers are not the exception, but are all too plentiful. He has not been taught to believe, or to realize, that he may be a Typhoid Carrier, a Diphtheria Carrier, and that he may be planting disease germs in the best medium possible outside of the human body. The knowledge which we possess and of which we are so justly proud, must be conveyed in some manner to even the hired man upon the dairy farm if these health hazzards are to be understood.

Warm milk should not be allowed to stand or remain in the stable, but should be hurried to the milk house immediately after being drawn from the cow. On reaching the milk house the warm milk should be poured into the cooler to remove animal heat and arrest bacterial growth.

The advantage of cooling milk as rapidly as possible after milking is too little understood and not sufficiently appreciated by the dairyman, to become what it must be, part of the dairy equipment which is indispensable. I find a great many dairies, particularly in rural communities, where the cooler is unknown. After cooling to say 55° Fahrenheit, milk should be strained and bottled and is then ready for delivering. The producer, however, who sells to a vendor does not, of course, bottle his milk, but strains it into 8-gallon cans and delivers to his vendor. It may have occurred to many of you, does not the vendor or middleman who does not pasteurize or otherwise improve the quality of the product increase the cost unnecessarily? It would seem that he does, yet my study of the question convinces me that the vendor is here to stay. There is too much bustle and too little time to spend on the proper washing and sterilization of bottles, cans, and bottle fillers to give delivery of milk the attention which it must receive. The ideal would probably be to have a number of producers, but only one vendor for each community. Some Health Officers argue that municipalities should set up model milk houses and should treat and deliver all milk used in the community, thus ensuring a uniform produce and without doubt could lessen the cost per bottle by economizing in the application of system. The present arrangements permit of sometimes as many as ten vendors supplying a town of 10,000 people, each with a full complement of helpers and a plant capable of handling many times the quantity of milk sold, and each delivery wagon perhaps chasing those of two other competing dairymen for a mile with the prospect of serving only two one-pint customers. Such a state of affairs may be designated as keen competition, but it does not cheapen the cost of operation.

Now we have set out, if briefly, some of the methods used in the production of milk and I venture to say much we have discussed is thoroughly well known to most of you, and at this point one can hear this question, "And after all this has been done, *the milk is still dirty and therefore not safe.*" The question is an absolute truth, speaking provincially milk sold in Ontario for domestic consumption (that is outside of our larger cities), is disgusting, dirty and dangerous. I would not have you think my decision is a chance one, or that my observations have been local. I am making a bold statement. I will even go further and say I see no possible chance for a betterment of conditions as long as we Health Officers and Health workers remain in our present state of apparent indifference. By this I do not mean we can do nothing for the question, each Health Officer and every practising physician desires and knows the value of a clean, safe supply of milk, but few of you have the time to spend among your dairymen in an attempt to reach your ideal.

I believe in the following statement (we have not the time to spend upon milk education) is exactly where the whole failure rests. Now then, if we admit that we have not sufficient time at our disposal to secure the desired result, shall we allow matters to continue as they are, using this perfectly legitimate excuse as a justification? Or should we at such a time as this, when we can at least give the question our whole attention at least for half a day, try to devise some means whereby the situation may at least be improved. Let me offer a few suggestions and a common sense plan by which, if the routing proposed be carried out, wholeheartedly, we may achieve a very considerable measure of success.

In describing this plan, I am assuming the ordinary routing Inspections, together with primary analysis of milk for fat, and the necessary sedimentation test for visible dirt, is to be carried out by the sanitary Inspector, superintended and guided by the Medical Officer. My assumption has as a basis the fact that there are many more full time sanitary inspectors than medical officers. This being the case, I believe the properly trained Inspector has a much better opportunity to systematically carry on the work.

Many of you will agree with me when I say many of our failures in Public Health work should be ascribed to the fact that public opinion is not with us. It is true if you meet the citizens of a town singly, or even at a meeting on some health question, you will find the great majority in favor of whatever the question may be. Nevertheless, there is not the enthusiasm shown to make the backing of the consumers a factor of real value. Now in the production of clean milk, how is the consumers' help and support to be enlisted in one campaign, which must start soon. On what can the public base its judgment? You might point to our Infantile death rate. True. You might also state that the milk is dirty and speaking broadly this is also true, but are you proving this to the consuming public in such a way as to make them demand that it shall be clean? No! Let me remind you that anything the great public demands and insists that they shall receive, they can get. If I am right in this, let us plan to harness the support and energy now being wasted and see if we cannot give the public a chance to judge as to which milk is clean and which is dirty, and I venture to say few will buy from the dirty producer. If I am right, the job is in a fair way towards completion.

Following up this thought then, the officials of all Boards of Health must purchase, first, a sedimentation tester; second, a Babcock tester with the necessary equipment for testing for butter fat; third, a lactometer and a thermometer. These few simple instruments are all that are necessary to supervise your milk supply.

Milk may be tested for dirt and an analysis made for fat every two weeks or monthly as is required. Now, in addition to the equipment mentioned, a square wooden frame with a glass front and have a sheet of white blotting paper fixed to the back, should be secured. This blotter should be ruled off into squares sufficient to correspond with the number of tests to be made annually (see sample as a demonstration). This frame we will call a Bulletin Board. After each test is made, sedimentation disc containing whatever dirt may have been in the bottle, these cotton discs are to be placed in the centre of each square shown. The fat analysis is to be placed immediately underneath.

To get the educational value from this examination, the bulletin board should not be kept in the office of the Inspector, but must be hung up in some place where the public congregate, say in the lobby of the City Hall. Immediately underneath, or above this board, should be attached a placard with the following announcement: "The Amount of Dirt Visible Upon These Discs has Been Filtered from a Pint of Milk, and the Figures Underneath Indicate the Amount of Butter Fat it Contains. Mr. Citizen, are You Satisfied With Your Milkman?

Now, if you have followed me as closely as I would have you, the strategy of such a procedure should be apparent. It is expected the consumer whose interest has been aroused, and to whom the opportunity of comparing results found upon this bulletin board has become a habit, now having found a means whereby he or she may judge as to whose milk is cleanest, he or she will promptly stop buying from the dirty producer and deal with the dairy which produces *the clean white discs.* Thus the dirty, indifferent milk producer loses his trade and the clean, honest dairyman gains new customers.

There is no surer method of producing clean milk than by the liberal use of your sedimentation tester, combined with the proper publicity of your results.

I have actually seen dairymen quarrelling over such results. Rivalry between dairymen is thus easily created and should be prized very highly by the Board of Health as a tremendous asset in our effort to supply the public with clean milk.

At this point, let me ask this question: "Are we not as Health Officers educating the consuming public to base their judgment almost wholly upon the percentage of fat (or cream) contained in the bottle?" Is it not a fact that the large percentage of consumers are much more interested in the question of supposedly rich milk? You may easily have a milk which will test 4½% butter fat drawn form a famous herd of Jersey cattle, which may be, and often is, loaded with Tubercle bacilli and polluted with dirt. If you agree with me that the public is basing its judgment in the manner set forth, shall we allow matters to remain as they are? Surely not!

We who have much to do with the question have a great responsibility and a heavy task. The ideas of the public in regard to this must be changed, if only we can arouse public opinion to demanding something better, our job will be less hard. Let me reiterate then, use your *Bulletin Board and the Little White Missionary to the very fullest extent.*

I have heard this statement many times, "but the production of clean milk is not nearly as simple as you would have us believe." I do not wish to convey any such opinion. It is not easy. There are a great many matters one must study, aside from the method of detecting dirt. In the hot summer weather preservatives may be used to prevent souring, such as formaldahyde. How to detect milk which has been skimmed or to which water has been added, I will go this far, however, and say, there is to my mind, little technical knowledge required to be a really good milk Inspector. There are three very important things one must know. First, the amount of dirt filtered from a pint of milk. Second, the temperature of the milk when we find it. Third, the age of the milk. Let me put this in another form:

Cleanliness determines the amount of first seeding down of the milk with bacteria.

Temperature affects the rate of increase after the milk has once become seeded, and the time affects the period or opportunity for development.

I contend, then, that if these three questions are properly taken care of, a large reduction in our infantile death rate, due to such diseases as diarrohoea and interitis, should be expected.

The Health Officer or Inspector must learn the art of making his own diagnosis and to draw his conclusions from these three very easily ascertained facts. He needs no laboratory result to determine whether milk is fit for human consumption. I fear a bacteriological examination or a quantitative analysis to determine the total solids present, are not so helpful as one might think.

Reasonably clean milk, kept at a high temperature, or which may have become heated during transit to the laboratory, will oftentimes give you a result very misleading. I firmly believe your determination should be made upon the ground or as soon after as possible.

Now, at this point of our discussion, is it too much to hope that a committee be struck from this meeting, whose duty it would be to bring in a simple system of milk inspection in which the public will co-operate and which will be effective. I feel sure this can be done. Might I go further and say if such a system can be devised, could it not be placed upon our statute books and used Provincially?

Are we not at present suffering from a lack of sufficiently trained workers? Is this not really where our failure lies? Could we not then also educate your Sanitary Inspectors to at least carry out efficiently such a simple system as I have tried to outline briefly?

How may we bring milk education to the Sanitary Inspector and to the dairyman himself, for be it noted, I claim it is not sufficient that the Medical Officer only possess such knowledge.

As a suggestion, could not the Government of Ontario either through the Board or the Department of Agriculture appoint say three milk specialists, not the ordinary technicians who study one side of the question only, but men thoroughly capable of officiating the many difficulties with which the dairymen are confronted. If these men are not to be successful, they must be able to discuss the relative values of the different breeds of cattle, and be familiar with the wide range of feeds used. In order that we meet upon some common ground these officials should also be able to bring to the community in which they may be working information as to how milk problems are being met and solved in other communities. I venture the opinion that unless Health workers who specialize on milk are accepted by the trade, little success may be expected. On the other hand, if we can only meet the dairyman upon some common ground and be looked upon as helpers, not merely critics, we are bound to succeed, and why not? Should not this be the very essence of co-operation? It must not be forgotten the men who produce our milk have little time to spend upon the Public Health aspect of the production, particularly so in the case of the small producer who finds it difficult to make both ends meet.

In such an educational campaign as I have mentioneed, these specialists could in each town visited, install and give information to the Milk Inspector sufficient to at least make possible the organization of a simple system of inspection. The Board of Health could also be met and finally, and probably the most important of all, could address a meeting of the consumers, setting up a basis by which the public might judge as to the cleanliness of the milk. I venture that if many such meetings were held and the value of clean milk demonstrated in simple non-technical language, there will be less dirty milk a year hence.

In conclusion, let me quote you the words of a very great man, uttered many years ago, and which I think adopt themselves admirably to the subject which we are discussing. He said: "No sanitary improvement will be effected, whatever acts you pass, or whatever powers you confer upon Public Officials, unless you create an intelligent interest in the public mind."

We must not depend too much upon the printed pages of our milk by-laws to educate the dairyman and the public. That's our job, for as this great man has said, and said truly, "you may have all the laws you like, together with a sufficient staff of officers for their enforcement, but if you cannot kindle sufficient interest in the minds of the people and of those whom your laws are expected to govern, then you have lost.

Canadian Public Health Association

Annual Meeting, St. John, N.B., June 7, 1922.

THE Annual Meeting of the C.P.H.A. was held at the Armouries, St. John, N.B., on Wednesday, June 7th, at 11 a.m. President, Hon. Dr. Roberts in the chair, and a good attendance of members present.

The President, in his opening remarks, pointed out the need of co-operation between the numerous voluntary agencies in the field of Public Health and deprecated the tendency of many of the organizations to limit their field of activity to one phase of public health only and to neglect other important phases.

The Secretary read the minutes of the meetings of May 18th, 1921, and October 17th, 1921, and these were adopted.

The Treasurer's report was read and adopted.

The Secretary reported that the office at 206 Bloor Street West, Toronto, had been temporarily closed on account of lack of funds, and that the temporary address of the association would be Room 25, Medical Building, University of Toronto, Toronto, Ont. This action was approved.

The following vote of thanks, moved by Dr. W. J. Bell, seconded by Mrs. Huestis, was carried unanimously:

"This Association desires to express its heartfelt appreciation of unbounded hospitality of the citizens of New Brunswick and especially the city of St. John, during the recent Public Health Congress."

A Nominating Committee consisting of Dr. Hattie, Dr. Desloges, Mrs. Huestis, and the Secretary, was appointed and retired.

While awaiting the report of this Committee a free discussion of the future policy of the Association took place. Finally it was moved by Mrs. Huestis, seconded by Dr. Bell, that a section of Industrial Hygiene be formed as a section of the C.P.H.A. This was carried.

In further connection of the policy of the Association, a Committee on Policy and Programme was appointed to report at a meeting on Thursday, June 8th, consisting of Dr. Hattie, Dr. Bell, Dr. Wyatt, President, Dr. Hastings, and Mrs. Huestis.

The Nominating Committee reported as follows:—

PATRON,
His Excellency, Baron Byng, of Vimy, Governor-General of of Canada.

VICE-PATRON,
Rt. Hon. Mackenzie King, P.C.

HONORARY PRESIDENT,
His Honour The Lieutenant-Governor of Alberta, Hon. Dr. Brett

PRESIDENT,
Dr. Wm. Laidlaw, Edmonton, Deputy Minister of Health, Alberta.

VICE-PRESIDENTS,
Dr. J. A. Baudouin, Montreal.
Mrs. R. J. Hooper, St. John.

GENERAL SECRETARY,
Dr. J. T. Phair, D.P.H., Toronto.

TREASURER,
A. Grant Fleming, M.B., D.P.H., Toronto.

SECTION CHAIRMEN:

CHILD HYGIENE,
Dr. W. J. Bell, Toronto.

MENTAL HYGIENE,
Dr. Colin K. Russel, Montreal.

SOCIAL HYGIENE,
Dr. J. J. Heagerty, D.P.H., Ottawa.

LABORATORY WORKERS,
Dr. Allan Rankin, Edmonton.

INDUSTRIAL HYGIENE,
Mr. T. B. McCaulay, Montreal.

EXECUTIVE COUNCIL—PAST PRESIDENTS.

T. A. Starkey, M.D., D.P.H., Montreal.
Chas. A. Hodgetts, M.D., D.P.H., Ottawa.
J. W. S. McCullough, M.D., D.P.H., Toronto.
C. J. C. O. Hastings, M.D., Toronto.
M. M. Seymour, M.D., D.P.H., Regina.
J. D. Page, M.D., Quebec.
W. H. Hattie, M.D., Halifax.
J. A. Hutchinson, Westmount, Que.
H. E. Young, M.D., LL.D., Victoria.

J. A. Amyot, M.D., C.M.G., Ottawa.
Hon. Dr. Roberts, St. John.

BRITISH COLUMBIA,
- Dr. R. H. Mullin, Vancouver.
- Dr. F. T. Underhill, Vancouver.

ALBERTA,
- Dr. Harold Orr, Edmonton.
- Dr. H. C. Jamieson, Edmonton.

SASKATCHEWAN,
- Dr. R. M. Bow, Regina.
- Dr. F. C. Middleton, Regina.

ONTARIO,
- Mrs. A. M. Huestis, Toronto.
- Mrs. H. P. Plumptre, Toronto.
- Dr. J. G. Fitzgerald, Toronto.
- Dr. Alan Brown, Toronto.
- Dr. G. D. Porter, Toronto.

QUEBEC,
- Dr. A. H. Desloges, Montreal.
- Prof. A. Vallee, Quebec.
- Dr. E. Pelletier, Montreal.

NEW BRUNSWICK,
- Dr. G. G. Melvin, Fredericton.
- Dr. Wm. Warwick, St. John.

PRINCE EDWARD ISLAND,
- Mrs. A. MacMahon, Charlottetown.
- Dr. I. J. Yeo, Charlottetown.

MANITOBA,
- Dr. A. J. Douglas, Winnipeg.
- Dr. Gordon Bell, Winnipeg.

NOVA SCOTIA,
- Dr. J. K. McLeod, Sydney.
- Dr. A. C. Jost, Halifax.

OFFICIAL ORGAN,

The Public Health Journal.

Editor, Dr. Gordon Bates, York Building, Toronto.

The report was adopted as read. The Nominating Committee suggested Edmonton as the next place of meeting, but the meeting decided that this should be left in abeyance for the present, though Edmonton or Banff were favoured.

The meeting then adjourned to meet Thursday, 11 a.m., June 8th, to consider report of the Committee on Policy.

The adjourned meeting assembled June 8th at 11.30 a.m. to hear report of the Committee on Policy and Programme.

The report was presented by Dr. Hattie, and was carried unanimously on motion of Dr. Hastings and Dr. Bell, and the delegates to the Round Table Discussion on Friday, June 9th, instruced accordingly.

REPORT OF COMMITTEE ON POLICY AND PROGRAMME.

St. John, N.B., June 8th, 1922.

The President and Members of the C. P. H. Association:

Your Committee beg to report that, having given careful attention to the matters referred to them, they wish to refer the following resolutions for the consideration of the Association:

(*a*) Resolved, that since public health is a single interest with different aspects, and not a group of special interests, the C. P. H. A. has decided, for reasons of efficiency, economy and the public welfare, to more extensively develop educational activities along the lines of all recognized phases of preventive medicine, and through an Advisory Council promote co-ordinated action among the existing agencies in the field of public health.

(*b*) And to this end it is further resolved that it is the desire of the C. P. H. A. that every nationally organized agency chiefly engaged in any phase of public health work in Canada will appoint a representative on the Advisory Council.

In order that the Association may be placed in a position to give effect to this resolution, it will be necessary that funds be procured and that a properly qualified executive officer be selected to carry on the programme which the resolution implies. If, therefore, this resolution be adopted, it is recommended that the Committee be continued and that Drs. W. J. Bell and B. L. Wyatt be appointed as joint secretary-treasurers of the Committee to develop a programme, advise with reference to necessary changes in the Constitution, secure funds, make inquiries relative to the qualifications of persons who may be available for the position of Executive Officer of the Association, and to attend to such other matters as must be dealt with in order to insure prompt and effective action. It is further recommended that, if necessasy, a special meeting of the Association be convened to consider changes in the Constitution.

Moved by Dr. McClenahan, seconded by Dr. Hattie, that a telegram of congratulation be sent to the Mayor and Council, Saskatoon, Saskatchewan, on their having passed Pasteurization By-law. Carried.

Moved by Dr. Hastings and Dr. Wyatt that Secretary be authorized to make minor changes in Constitution, if necessary, without changing principle of Constitution, to assist Committee on Policy. Carried.

Adjourned.

ROUND TABLE DISCUSSION ON CO-OPERATION OF VOLUNTARY AGENCIES.

A Round Table discussion on the co-operation of voluntary organizations was held in the Armouries, St. John, N.B., on Friday, June 9th, 1922. The Hon. Dr. Roberts, Chairman; Dr. J. J. Heagerty, Secretary.

The chairman explained the object of the meeting, namely: to bring out method of carrying on the work of voluntary health organizations in each province, so as to prevent overlapping and wastage of time, energy and money.

Representatives of voluntary organizations were present as follows:

1. Canadian Red Cross Society, Col. Nasmith, C.M.G.
2. Victorian Order of Nurses, Miss Harry.
3. Federal Department of Health, Dr. MacMurchy.
4. Canadian Medical Association, Dr. Hutchinson.
5. Canadian Public Health Association, Committee on Policy.
6. Canadian National Committee on Mental Hygiene, Dr. Hattie.
7. Canadian National Council for Combating Venereal Diseases, Dr. Bates.
8. Canadian Association for the Prevention of Tuberculosis, Sheriff Cook, Dr. Wodehouse.
9. Provincial Officers of Health, Dr. Roberts, N.B.; Dr. Hattie, N.S.; Dr. Chisholm, N.S.; Dr. Melvin, N.B.; Dr. McClenahan, Ont.; Dr. Laidlaw, Alta.
10. Independent Order of the Daughters of the Empire, Miss Liggett.
11. Women's Institutes, Mrs. Harold Lawrence.
12. Public Health Nurses, Miss H. T. Meiklejohn.

Discussion was participated in by the following: Col. Nasmith, Miss Harry, Dr. Helen MacMurchy, Mrs. Huestis, Dr. Laidlaw, Dr. Chisolm. Dr. Hattie proposed the following resolution, seconded by Dr. H. Chisolm, which was unanimously adopted:

"Resolved, that this Round Table endorse the principle of the resolution of the C. P. H. A. authorizing the formation of an Advisory Council to co-ordinate the work of the various nationally organized agencies engaged chiefly in public health work in Canada, and that each of these agencies be requested to represent, as far as practicable, such allied organizations as are in any way assisting the activities of these agencies.

"Further resolved, that steps be taken to organize individual provinces along similar lines, either through the provincial departments of health or through such organization as a provincial department of health may designate for the purpose."

Meeting of The Association of Medical Health Officers of Nova Scotia

THE annual meeting of this Association was held at Sydney, on July 4th and 5th. No more enthusiastic meeting has ever been held in the history of the Association. All papers read and the discussions which followed took on a very practical and instructive trend.

Dr. Cameron of Antigonish, read an up-to-date paper on "The Sources of Infection," and in conjunction therewith described the operation of the travelling clinic in Antigonish County which had just completed its itinery. The work accomplished by this clinic was a revelation. It showed what can be done by the active co-operation of all interested organizations, and opened up vistas of assurance, confidence and hope in future health progress.

Papers were read by Dr. Miller of Kentville on "The Place of the Clinic," and by Dr. McLeod of Sydney on "The Place of the Public Health Nurse in the campaign against Tuberculosis." The measures advocated in these two papers when combined with the work of the travelling clinic seems to offer hope of a complete solution of the tuberculosis problem. A resolution along these lines was drawn up for presentation to the Government. With a little pressure all along the line from any interested organization the matter can be put over and something practical accomplished in the way of the control of one of our most difficult problems. Dr. P. S. Campbell of Port Hood, gave a most practical paper on "The Nostrum and Quackery Evil", taking the advertisements of one day in the country papers he showed the operations of such advertisers, and followed this up by obtaining official reports on the qualifications of such advertisers and the value of their Nostrums. Dr. Amyot, Deputy Minister of Health, continued this discussion showing what the Dominion Government had already done to control this evil. The number of patent preparations now registered in Canada had been reduced from 60,000 to 6,000 and also showed that very considerable progress was being made to protect the public in this respect.

Dr. Black, dental surgeon of Sydney, read a very excellent paper on "Oral Hygiene," quoting statistics and eminent authorities in support of a claim that a large majority of the ills that the youth of the country suffers from are due to defective dentition and oral sepsis.

A report was presented to the Association summarizing the progress made in the extension of the public health nursing programme and that for combating venereal disease.

The evening session was well attended by the general public. Addresses were given by the President, Dr. Armstrong, and by Dr. Amyot of the Dominion Department of Health on the relation of the Public Health Bodies of Canada. The meeting ended with a photo-play for the education of the public on measures for the control of venereal disease.

A short session was held on the morning of July 5th for the election of officers and the report of the resolutions committee.

The following slate of officers was elected for the ensuing year:

President—Dr. C. W. Bliss, Amherst.

First Vice-President—Dr. P. S. Campbell, Port Hood.

Second Vice-President—Dr. C. S. Marshall, Bridgewater.

Council—Dr. H. B. Havey, Stewiacke; Dr. E. E. Bissett, Windsor; Dr. M. G. Tompkins, Dominion.

Secretary—Dr. W. H. Hattie, Halifax.

Time and place of meeting, the day preceding and at the same place as the meeting of the Nova Scotia Medical Society next year.

The Victorian Order of Nurses for Canada

Report of the Chief Superintendent, MRS. J. C. HANINGTON.

Read at the Annual Meeting of the Victorian Order of Nurses, Ottawa, June 9th, 1922.

THE Victorian Order of Nurses for Canada has reached a very important mile post, its quarter century of existence and service to Canada. Out of the experience of two women who had seen the suffering and tragedy which accompanied the settlement by families of the North West Territories, came the thought and desire that the people of Eastern Canada should find the way to supply these pioneers with trained nursing Service. This led to the action of the Vancouver Local Council of Women in sending a resolution to the Countess of Aberdeen, wife of our Governor-General of that time, and President of the National Council of Women. The resolution was moved by Mrs. James MacAuley and seconded by Mrs. D. Gavin, the women referred to above.

On the same day there reached Lady Aberdeen a letter from Mrs. Wm. Dennis, President of the Local Council of Women of Halifax, suggesting that her Excellency take steps to establish as a National Memorial of the Diamond Jubilee of Queen Victoria an Organization to supply nurses thoroughly trained in Hospital and District Nursing, for the nursing of the sick who are otherwise unable to obtain trained nursing Service in their own homes in both town and country districts.

It was Lady Aberdeen's knowledge of our conditions and a strong desire to relieve them, coupled with a great energy and a faith in the support of the Canadian people that we owe the Victorian Order of Nurses as we have it to-day.

You have presented here in comprehensive form, massed statistics, which will give the general public the result of our twenty-five years' work. These do not, however, give the completed story, and they were collected with the greatest difficulty from a number of sources. Such a thing as a Central Administration office executive secretary, filing clerk, and stenographers, vital statistics, publicity material, lending library, and affiliations with leading universities for the supervised field work for their students, were not dreameed of by our Founders; but are to-day an important feature of our work. In fact they are the Centre from which the life of the Order circulates, and it is the maintenance of this Centre which is causing the concern of the Board of Governors. In securing the figures presented to you we realized the struggles of the early years, the collecting of one, two or three thousand dollars to maintain the Central Office, pay the salary of the Chief Superintendent, which was less than that of a staff nurse of to-day, and such small expenses as postage, travelling expenses of the Chief Superintendent and the nurses, from post to post.

Such early records as we have show that the first centres such as Toronto, Montreal, Halifax and Ottawa contributed each year from their funds to the upkeep of the Central Office with a few special donations together with the original sum given by Lord and Lady Aberdeen. It was to the wives of our Governors-General that we owe our endowment fund which, in addition to grants to hospitals and local associations in the past, is now the only source of income of the Central Executive with its ever increasing needs.

I am not going to attempt to review in any detail these last twenty-five years which are recorded in the hearts of hundreds of thousands of sick and suffering folk throughout the Dominion who have been served by our good nurses. The services of well trained nurses for all, people of moderate income as well as the poor, was the dream of Mrs. MacAuley and Mrs. Dennis. I feel, however, that it will be of interest for me to review, more or less in detail, the work of the past five years, which covers my time of stewardship with the Order.

The tremendous organization and expansion under my predecessor will probably never be equalled or recorded by any subsequent superintendent; but the responsibility for the superstructure on these strong foundations will pass from one incumbent of the office to another.

My duties commenced during a critical period, overseas nursing service claimed many of our workers, and the needs of our country whilst at war forbade obtaining funds with which to extend our service. Our aim has been four-fold:

(1) *To establish good office administration with complete record and filing system.*
(2) *To improve and standardize the nursing service of all branches.*
(3) *To secure the services of, or train, a sufficient number of graduate nurses in public health work and keep the several staffs up to strength.*

(4) *To keep a sufficient number of inspectors in the field to co-ordinate the work with the policy of the Central Board.*

This four-fold development has advanced slowly owing primarily to lack of funds. The Central Executive was in accord with the forward policy of the executive nurses; but was unable to give sufficient financial support.

Our nursing service is a most strenuous one, seven days a week, including emergency night calls. It is most discouraging to see the number of such calls; but also something to be proud of, in that they have been answered uncomplainingly for twenty-five years,—a record not attained by any other nursing service on the American continent.

Salaries have been doubled and staffs increased, and yet our local associations have met their responsibilities and "carried on" under most trying financial conditions. They have also met the competition and overlapping of other organizations doing practically the same work and drawing financial support from the same source.

Five years ago your Central administration consisted of your Chief Superintendent, one Inspector and an assistant who was the housekeeper of the Home on Somerset Street, who did such office work as she had time and training for. The Chief Superintendent spent most of her time in the field, leaving no one to administer the affairs of head office, which was a room in the Somerset Street Home. To-day, thanks to the progressive policy of the Central Board and the expansion of the work, we have complete and comfortable offices in the Jackson Building, with a Chief Superintendent, Assistant, an Inspector, Executive Secretary, two stenographers and, when the work presses, we have often to employ a third. A new and satisfactory system of reports and records has been prepared and are supplied to all our branches, while modern system of filing all correspondence and nurses' records has been installed, books are kept and the business of the Order is carried on according to modern requirements. The nurses' uniform material is purchased wholesale and distributed to the different branches. Every day brings letters from nurses all over the Dominion telling of their problems, wanting advice or literature on some special line of work developing in their communities. Such calls are met to a limited degree by the tiny library, purchased a volume at a time, and such pamphlets as we can afford to publish. Local associations write us wanting suggestions or advice about nursing service which all spells heavy correspondence and lengthy letters of explanation. Each branch has a different line of approach and it is the meeting of all these demands with a prompt and sympathetic response that makes for the remarkable loyalty and esprit de corps which characterize the Victorian Order of Nurses for Canada.

I am not, however, satisfied with the service we are giving. Your Chief Superintendent is away too much, which results in important work connected with the nursing service becoming congested, and local associations are quite justified in their complaints of the lack of prompt attention to their demands.

The improving and standardizing of the nursing service of all branches is a never ending and wholly absorbing occupation for our executive nurses. In this work we have always had the sympathetic co-operation and support of the local associations, and in this improvement is the very soul of our Order, not that we are changing our methods, but are having more time to develop them according to the indivdual needs of the communities. The motor car is the greatest blessing for the district nurse, saving time and energy for the work, leading to economy and efficiency of effort. Here again we owe thanks to local generosity.

The need of a district office with supply closets, etc. is felt even in the small district. The Homes for the nurses in connection with district offices are still thought to be necessary in some branches. Montreal has given them up and Vancouver will do so when they can sell the building. This re-organization and standardization of our service greatly strengthens our scope of usefulness and has unlimited possibilities.

To secure a sufficient number of suitable women for our work requires our constant attention. We must have women of good education, graduates of a standard training school and with public health training or experience. We gave this formerly, in our own training centres, which training we discontinued and during the past year have been experimenting with a scholarship system in connection with the various Canadian universities giving post-graduate courses in public health.

For the year past we had twenty-eight students taking this work. One has returned the amount of the scholarship—others have been assigned to the various branches. With the necessary staff adjustments, however, we find ourselves again short of nurses. One of the first duties of the newly-elected Board must be in consultation with the Director-General, to decide what action they will take for next year's activities, in this important department of our work.

Of equal importance with the question of a sufficient supply of nurses is the imperative necessity of increasing our inspection service. In addition to Miss Cole, we have only one inspector in the field. The local associations have just cause for complaint from the lack of attention from Central Office. It often occurs that Miss Cole has to substitute for a District Superintendent—or do some district reorganization work, and this necessitates both Miss Forshaw and the Chief Superintendent being in the field. It is at these times that correspondence regarding local difficulties is neglected. There is not time to follow up inspections with the necessary reports. This question is also a financial one and the way must be found to meet it.

In addition to ordinary inspection, surveys and organizations of new fields of labor must be carried on. This is most important as the success of the Service depends so often on the preliminary visit.

Both Miss Cole and Miss Forshaw have worked unceasingly to carry to our local associations and their nursing staffs the benefit of trained inspection and it is felt that where there have been difficulties they are quickly and happily adjusted when there is some one from head office available to consult with.

The statistical reports of the past year give some interesting facts in the development of our nursing service. The total number of visits paid is over half a million, namely 508,767. This is an increase of 95,546 over the previous year, and a total of 1,883,237 during the past five years. The marked increase of the prenatal visits is very encouraging: they number 20,828 which is an increase of 8,219 in the past year, and nearly three and one-half times as many as five years ago. This is a great source of pride to the nursing service, as all these visits were made to mothers in their own homes, showing them how to utilize materials found in the home to the best possible advantage, as well as instruction in the proper care of the mother's health and preparation for the birth of the babe.

We cared for 16,165 maternity cases, an increase of 4,982 over the previous year. We cannot give the percentage of births cared for by the Victorian Order of Nurses for the Dominion, or in the different provinces, owing to the lack of complete birth registration. We have the figures for a few of the larger centres which will be of interest: In Vancouver 12% of the total births are cared for in their homes by the V. O. N., in Toronto, 20% and in Montreal, 20%, while Halifax reached 35%. In smaller districts the percentage would be much higher.

The Child Welfare visits stand at 52,562, which is 7,366 more than the year before, and a total of 459,663 child welfare visits for the past five years, which should be a valuable contribution to Public Health. This represents preventive work carried on in the home, following up our own babies, taking on other children in the family, instructing mothers with regard to better methods of caring for the health of their children.

The school work presents rather a surprise. In my report of 1919 I pointed out that the school visits had dropped to 1,145 and I expected they would continue to decrease owing to the organization of school nursing service in the various provinces. During the past year our school visits have climbed to 6,665, which is nearly as high as five years ago and an increase of 3,981 over the previous year. This increase is due to the fact that many people feel this work can be done more economically by this Order, others preferring our nurses because we are already familiar with their living conditions, and in this way another personality is not introduced into the home with a certain authority to investigate their conditions. Our people still retain the tradition that "an Englishman's home is his castle." As one rather exasperated woman exclaimed after being called upon by representatives of different organizations, "You see, Miss, if I have to entertain three young ladies in a morning I have no time to cook my man's dinner."

Such school work as we do is much better done than formerly. We carry on this work in conformity with the various provincial programmes for school nursing service and reports are made to the Provincial Departments on the forms they issue for this purpose.

Continuous nursing is decreasing rapidly; but night visits are increasing, reaching the considerable number of 13,105, an increase of 3,368 over the past year and an increase of 5,468 over the number made five years ago. This increase is to be expected, however, with the increase of maternity cases and represents more than anything else the sacrifice of nurses taking up our work. The doctors are showing more consideration than formerly in regard to this work, which eases our lot considerably. When we can afford night staffs generally it will be a great day for our nurses and for those we serve.

As a result of our new records we have a much more intelligent idea of the detailed work of the several branches and have some conception of the educational and preventive work carried on, also the proportion this part of our work bears to the general nursing service. After hearing the figures I have quoted regarding the actual nursing service with night calls, etc., there can be no doubt existing in your minds but that actual nursing is being in no way neglected. I want to draw your attention, however, to a few outstanding facts. On the Winnipeg Annual Report I find the following items:

149 Mothercraft Classes.
10 Mothercraft Classes graduated.
152 Home Nursing and Mothers' Classes held; many talks given by physicians (at the request of the V. O. N.)
32 Nurses' Conferences held."

With the large number of nursing visits from that Branch and the heavy maternity service, great distances and strenuous climate, this struck me as a remarkable record and means organizing ability and vision on the part of Miss Prichard and her staff. This caused me to go through the details of this work throughout the Order.

To be continued.

Social Background

The International Labour Organization and What It Is Doing

BY MISS R. M. HUTTON, *Division of Industrial Hygiene, Provincial Board of Health of Ontario.*

PROBABLY very few workers know what exactly the International Labour Organization is, what it stands for, and what it is doing. Yet the organization exists solely for the purpose of improving working conditions throughout the world and its formation is a very striking sign of the modern point of view with regard to the part to be played in the world by labour. It marks two things in especial: first, the attempt to break down national barriers and to set international standards of life so that the weakest individual in the most backward country may be benefited by the more humane civilization of progressive countries; second, the attempt to share social responsibility and to give labour more voice in the making of labour laws. If the International Labour Organization did nothing it would still be a notable sign post on the highway of democracy. As a matter of fact, however, the organization far from doing nothing is exceedingly active, and its activities having to do with the world's working population, should be of strong personal interest of every member of that population.

THE INTERNATIONAL LABOUR ORGANIZATION ESTABLISHED AS PART OF THE PEACE TREATY.

During the war it was often said that we were fighting "to make the world safe for democracy" and in the Peace Treaty ending the war practical steps were taken to promote this safety. One step was the establishment of the International Labour Organization to improve the existing conditions of labour which it was felt involved "such injustice, hardship, and privation to large numbers of people as to produce unrest so great that the peace and harmony of the world are imperilled." Certain means of improving labour conditions were especially mentioned as follows: "The regulation of the hours of work, including the establishment of a maximum working day and week"; "The regulation of the labour supply"; The prevention of unemployment"; "The provision of an adequate living wage"; "The protection of the worker against sickness, disease, and injury arising out of his employment"; "The protection of children, young persons and women"; "Provision for old age and injury"; "Protection of the interests of workers when employed in countries other than their own"; "Recognition of the principle of freedom of association"; "The organization of vocational and technical education, and other measures."

HOW THE INTERNATIONAL LABOUR ORGANIZATION WORKS.

Fifty-four different countries belong to the organizaztion and are entitled to send representatives to the annual conferences. Each country may send four representatives, of whom two are Government delegates, one a representative of employers, and one a representative of employees.

At these conferences schemes for improving working conditions are discussed and recommendations and conventions suggesting reforms are made. Each country which belongs to the organization —practically all countries belong—is then pledged to consider the recommendations and conventions within at the outside eighteen months' time. They may either reject them, accept them in part or accept them complete, and if they accept they must bring in legislation to put the reforms in force. Before either accepting or rejecting each country will have to reconsider its own conditions and possibly make special investigations to learn the applicability of the proposed reforms to its own labour problems.

QUESTIONS CONSIDERED BY THE LABOUR ORGANIZATION TO DATE.

So far there have been three annual conferences the first at Washington in October and November, 1919; the second at Genoa in June and July, 1920; and the third at Geneva in October and November, 1921. The following are the results of the three conferences:

DRAFT CONVENTION AND RECOMMENDATIONS ADOPTED AT THE WASHINGTON CONFERENCE.

Draft Convention limiting the hours of work in industrial undertakings to eight in the day and forty-eight in the week.

Draft Convention concerning unemployment.

Recommendation concerning unemployment.

Recommendation concerning reciprocity of treatment of foreign workers.

Draft Convention concerning the employment of women before and after childbirth.

Draft Convention concerning employment of women during the night.

Recommendation concerning the prevention of anthrax.

Recommendation concerning the protection of women and children against lead poisoning.

Recommendation concerning the establishment of Government Health Services.

Draft Convention fixing the minimum age for admission of children to industrial employment.

Draft Convention concerning the night work of young persons employed in industry.

Recommendation concerning the application of the Berne Convention of 1906 on the prohibition of the use of phosphorus in the manufacture of matches.

DRAFT CONVENTIONS AND RECOMMENDATIONS ADOPTED AT THE GENOA CONFERENCE.

Recommendation concerning the limitation of hours of work in the fishing industry.

Recommendation concerning the limitation of hours of work in inland navigation.

Recommendation concerning the establishment of national seamen's codes.

Draft Convention fixing the minimum age for admission of children to employment at sea.

Recommendation concerning unemployment insurance for seamen.

Draft Convention concerning unemployment indemnity in case of loss or foundering of the ship.

Draft Convention for establishing facilities for finding employment for seamen.

DRAFT CONVENTIONS AND RECOMMENDATIONS ADOPTED AT THE GENEVA CONFERENCE.

Recommendation concerning the prevention of unemployment in agriculture.

Recommendation concerning the protection, before and after childbirth, of women wage-earners in agriculture.

Recommendation concerning night work of women in agriculture.

Draft Convention concerning the age for admission of children to employment in agriculture.

Recommendation concerning night work of children and young persons in agriculture.

Recommendation concerning the development of technical agricultural education.

Recommendation concerning living-in-conditions of agricultural workers.

Draft Convention concerning the rights of association and combination of agricultural workers.

Draft Convention concerning workmen's compensation in agriculture.

Recommendation concerning social insurance in agriculture.

Draft Convention concerning the use of white lead in painting.

Draft Convention concerning the application of the weekly rest in industrial undertakings.

Recommendation concerning the application of the weekly rest in commercial establishments.

Draft Convention fixing the minimum age for the admission of young persons to employment as trimmers or stokers.

Draft Convention concerning the compulsory medical examination of children and young persons employed at sea.

EACH COUNTRY'S INDIVIDUAL RESPONSIBILITY.

The International Labour Organization cannot, of course, legislate for the individual countries. All it does is to promote public opinion by making known to all the countries belonging to it the general standards of labour conditions which have received majority assent from the accredited representatives of the Governments, employers, and employees of the different countries. It remains with each country to adopt to its own use the experience of others and to keep its standards of life at the highest possible level.

Incidence of Venereal Disease in the Dominion

There is a decrease in the admissions to venereal disease clinics in some of the provinces, notably Alberta, Saskatchewan and Manitoba. This decrease would appear to indicate a diminishing incidence of venereal disease in these provinces. The subjoined figures for all of the clinics in operation in the Dominion show a gradual increase in the attendance which may and probably does, mean a gradually increasing incidence of venereal disease for the whole Dominion.

Whether venereal disease is decreasing or not in the less densely populated provinces is a question. In the smaller cities and towns throughout the Dominion, the "per capitum" attendance at venereal disease clinics has always been less than in the larger cities and towns, not because the incidence of venereal disease is less in the small city and town, but because the small town atmosphere makes for concealment. There is certainly no diminution in the incidence of venereal disease in the more densely populated centres and this is the experience in the United States.

Reporting of venereal diseases by physicians would give us a clear insight into the question and it is to be regretted that the practitioner has not as yet the "clear vision" that the situation calls for.

J. J. Heagerty.

CANADA.

New Cases Admitted to Venereal Disease Clinics.

January.	1921.	1922.
Syphilis	513	535
Gonorrhoea	564	737
Chancroid	18	30
February.		
Syphilis	500	737
Gonorrhoea	467	485
Chancroid	7	23
March.		
Syphilis	333	433
Gonorrhoea	367	524
Chancroid	13	40

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE MONTH OF JUNE, 1922.

COMPARATIVE TABLE.

	June, 1922.		June, 1921.	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Small-pox	104	0	170	2
Scarlet Fever	151	5	289	6
Diphtheria	191	19	371	20
Measles	2,103	4	392	2
Whooping Cough	65	6	194	7
Typhoid	24	2	29	5
Tuberculosis	204	142	220	105
Infantile Paralysis	....	....	....	....
Cerebro-Spinal Meningitis	3	3	9	9
Influenzal Pneumonia	....	18	2	2
Primary Pneumonia	....	140	....	126

VENEREAL DISEASES REPORTED FOR JUNE, 1922.

	1922 Cases.	1921 Cases.
Syphilis	219	112
Gonorrhoea	210	155
Chancroid	....	3
	429	270

The health of the Province for the month of June is very satisfactroy compared with June, 1921, according to reports received of communicable diseases.

It will be observed in the comparative table a marked reduction has taken place in small-pox, scarlet fever and diphtheria.

The decrease in small-pox is 38 per cent., scarlet fever 47 per cent. and diphtheria 48 per cent.

Measles, which have been more or less prevalent in some cities and towns for the last few months, show a slight abatement. The municipalities reporting the greatest number of cases are: Toronto 1,084 cases, Ottawa 209, Hamilton 170, Essex Border 223, Oshawa 52.

Small-pox cases are 66 less. The only recent outbreak during the month is at Woodstock, where some 11 cases have been reported. The following places reported the disease: Toronto 7 cases, Ottawa 32, Woodstock 11, Waterloo Township 8, Ridgetown 6, St. Catharines 4, Niagara Falls 5, Hamilton 3, Leamington 4, Owen Sound 2, Kitchener 4, Saugeen 2, Cumberland 2, Clarence Township 4, Tavistock 2, and Port Elgin, Chatham, L'Original, Waterdown Newmarket, Puslinch, West Flamboro 1 case each.

COMMUNICABLE DISEASES REPORTED BY LOCAL BOARDS OF HEALTH FOR THE MONTH OF MAY, 1922.

Comparative Table.

	1922.		1921.	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Small-pox	88	0	533	1
Scarlet Fever	219	5	386	11
Diphtheria	190	16	434	32
Measles	2,165	10	516	8
Whooping Cough	119	11	228	15
Typhoid	23	6	38	8
Tuberculosis	200	122	224	130
Infantile Paralysis	......	......	3	2
Cerebro-Spinal Meningitis	4	4	10	7
Influenzal Pneumonia	......	118	31	19
Primary Pneumonia	......	245	......	181

TABLE SHOWING DECREASES BY MONTHS, 1922.

	Small-pox Cases.	Scarlet Cases.	Diphtheria Cases.
January	170	518	486
February	185	610	403
March	113	446	320
April	79	249	308
May	88	219	190

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH, MAY, 1922.

	1922.	1921.
Syphilis	104	261
Gonorrhoea	143	252
Chancroid	3	6
	250	519

MUNICIPALITIES REPORTING SMALL-POX.

Ottawa	8	Rama	1
Aldborough	1	South Norwich	5
Kingsville	1	L'Original	2
Nelson	1	Bucke Township	3
Chatham	1	Kitchener	1
Ridgetown	1	Waterloo Township	3
Zone	1	Niagara Falls	9
St. Catharines	3	Hamilton	1
Niagara Township	1	Toronto	36
Merritton	1	Newmarket	3
Widdifield	2	Cumberland	3
		Total	88

It is most gratifying to know communicable diseases show a very low prevalence in the Province for the month of May compared with the corresponding month of 1921, as reported by Local Boards of Health.

The only epidemic is in measles, and is confined chiefly to three cities. Toronto reported 1,319 cases, Ottawa 228, Hamilton 122, making a total of 1,669, out of 2,165 for the whole Province.

A marked decrease has taken place in small-pox, scarlet fever and diphtheria for all the months since the first of the year, except February, when a slight increase was shown in small-pox and scarlet fever, as may be seen in the attached table.

Long distance calls and requests by letter continue to come to the Provincial Board of Health, Ontario, asking for specific information about Infantile Paralysis. The chief questions asked are usually as to the duration of quarantine and whether contacts should be kept in quarantine. Here are a few particulars issued by the Provincial Board of Health regarding the prevention of the spread of this infection, which may be of interest to the profession and the public:—

1. Every case must be quarantined for a period of six weeks.

2. All children who have been in contact with a case must be quarantined and kept under observation for a period of two weeks.

3. Adult members of the family who are wage-earners may be allowed to go about their work subject to the regulations of the Provincial Board and in the discretion of the Medical Officer of Health.

4. Where there is an outbreak, gathering of children, such as picnics, picture shows and playgrounds, should be prohibited.

5. The source of origin of each case should be carefully enquired into in order that proper quarantine may be maintained.

6. In houses where cases appear all doors and windows should be screened, the premises kept clean, and no accumulation of garbage or waste permitted.

7. All cases should be at once notified to the Medical Officer of Health, and by him to the Chief Officer of the Provincial Board.

8. Mild cases, showing slight headache, rise of temperature and vomiting persisting for a few days, with slight muscular weakness and absence of paralysis, should be quarantined. These are probably one of the chief sources of contagion.

9. As Infantile Paralysis is a most serious disease and in the present epidemic giving a high death-rate, the public is urged to second the efforts of the authorities in every way in order to prevent a severe outbreak in the Province.

10. The children from an infected house should be allowed out of doors but should be kept by themselves and away from large groups of other children. In one and two-family houses it is advisable not to allow the children from an infected family outside the yard for several weeks after the onset of the case.

11. During the continuance of an epidemic of poliomyelitis children should not be allowed to congregate in public places.

12. Absolute cleanliness of all homes is essential; such cleanliness should include:
    - (a) Screens in all windows.
    - (b) Flies kept out of all rooms.
    - (c) Thorough cleanliness of all floors, woodwork, bedding and clothing.
    - (d) Avoidance of dust (all sweeping should be done after the floors have been sprinkled with wet sawdust, bits of wet newspapers or wet tea leaves).

(e) Garbage cans kept covered and washed out in hot soapsuds after they have been emptied.

(f) No refuse, either of food or other waste, allowed to accumulate.

13. Personal habits of cleanliness are essential; the hands should be washed before each meal, after each visit to the toilet, and before going to bed. Children should be warned about putting the fingers into the mouth or nostrils.

14. When sneezing or coughing, a handkerchief should be held over the mouth. Kissing of children is also a dangerous practice and should be avoided.

15. A separate room must be provided for the patient. No one must be allowed in this room except the attending physician, the nurse, clergyman or M. O. H.

News Notes

The new name of the Association for the Prevention of Tuberculosis should be noted by all public health workers. The change was confirmed at the annual meeting in St. John. References should now be made to the Canadian Tuberculosis Association.

The following note has been published in various newspapers at the request of the Ontario Safety League:

"Collisions at railway crossings continue. Most of these collisions are the culminations of races between trains and autos, ending in a time. The train, however, always succeeds in knocking the auto off the tracks, for no one has ever heard of an auto knocking a train off the tracks. It may therefore appeal to some auto drivers' sense of logic that in all such races a tie means that the auto loses."

The Secretary of the Canadian Tuberculosis Association spoke in English at the Shrebrooke meeting of the Union of Quebec Municipalities on June 20th, and was assisted by Dr. Odelon LeClerc, member of the Council of the Quebec Provincial Board of Health, who spoke in French. The conference was well attended, and the delegates showed keen interest in the three activities outlined, in which it was planned to afford co-operation to assist municipalities in tuberculosis work.

Miss Margaret Grier, B.A., previously of the Canadian Public Health Association office and later with the Big Sister Association of Toronto, has moved to Ottawa and accepted secretarial work in the office of the Canadian Tuberculosis Association.

The Provincial Medical Association of Saskatchewan, at their annual meeting held in Saskatchewan Sanatorium at Fort Qu'Appelle, in June, passed aunanimous resolution, requesting the Provincial Government to provide immediately, additional sanatorium beds for the tuberculous of that Province.

Three days, December 8th, 9th and 10th have been set aside by the health organizations of the United States as "Health Days." During these days a special effort will be made in every State and community throughout the country to take stock of the health of every individual man, woman and child. The forces of many health agencies will be centred on one objective—to induce all persons who do not now undergo periodic health examinations to begin such examinations during these days and to continue them afterwards.

Dr. J. W. S. McCullough, Chief Officer of Health for Ontario, who went to England to attend the Public Health Congress at Bournemouth, sails for Canada on August 12th.

Dr. Lyttle, M.O.H., Barrie, Ontario, and Dr. Meldrum, M.O.H., Weston, Ontario, were among those who took the July post-graduate course in pediatrics at the Hospital for Sick Children, Toronto.

The Provincial Board of Health, Ontario, is trying out a new feature at the Canadian National Exhibition this year. A series of clinics has been arranged whereby not only children but adults can be examined for physical defects and conditions which, if not attended to, may lead to ill-health and incapacity in later years. A number of prominent physicians and dentists in Toronto and elsewhere have offered their services. No treatment will be given, the idea being to stimulate public interest in the question of health, so that well people may keep themselves well, and those who are heading for trouble from a health point of view may be warned in time, before conditions that might be put right have become chronic.

The different divisions of the Provincial Board of Health, Ontario, will also have attractive booths for distributing literature and giving practical information about the work being carried on.

Dr. Lyttle, M.O.H., Barrie, has been making an investigation of summer resorts on Lake Simcoe. He finds a noticeable lack of sanitary conditions in some of the places visited and means are being taken to have conditions improved.

Editorial

THE CHICAGO PUBLIC HEALTH INSTITUTE.

AN interesting private experiment in venereal disease control is being carried on in the city of Chicago, under the direction of Dr. Joseph G. Berkowitz, and backed by such men as Harold F. McCormick, Marshall Field and others. A clinic with fifteen attending physicians has been established in a down town office building. The clinic supplies expert treatment at a charge very much lower than the usual speecialists charge, and because of good business management and good publicity methods in the form of full page advertisements in daily papers there is a constant stream of apparently well satisfied patients in attendance. Since the opening of the clinic less than two years ago there have been 19,000 patients under treatment, while at present the average is about 800 per day. In other words, the yearly number of treatments is about 300,000, or three times as many as are given in all of the clinics of Quebec and Ontario combined. Figures are as yet not available as to relation that this number of treatments bears to the number of treatments given in the other clinics in Chicago.

From a report of an inspection of this clinic undertaken by the Canadian Social Hygiene Council, the PUBLIC HEALTH JOURNAL believes that the clinic is efficiently run and is dealing with the venereal disease question from the treatment point of view in a large way almost impossible to the ordinary free clinic.

It is understood that the members of the staff of this clinic have run foul of their medical society, because of accepting positions on its staff. This, however, is no criterion. Medical societies, great as is the service they render from the educational point of view, have not been noted for stressing the public health aspects of medical organization, and are very prone to be nervous over departures from the conventional attitude towards medical practice.

The Chicago experiment is very interesting. It has certainly resulted in delivering skilled medical attention to a great mass of people. The self-respect of the patients has been preserved, and their pockets considered. Furthermore, the physicians are not in receipt of inordinate salaries, and the clinic makes no profits. By attracting this enormous number of patients the fact has again been demonstrated that the venereal disease problem is one of tremendous importance. All of which is a picture well worth the consideration of the Health Officer.

A MARTIAN CONCEPTION.

IT would appear that one of the great failures of our modern life is a general false conception of values. Few of us appreciate the fact that after all happiness is one of the greatest ends to be achieved for humanity and that happiness and the normal are really one and the same thing.

An investigating visitor from Mars would probably rapidly conclude that the main aim of human progress is material prosperity for the few. Education has evolved us by slow stages to something better than the bestial. The universities had a hand for a time in making cultured gentlemen of sorts—of a few of us. Now becoming more practical we study Gresham's law, the law of diminishing returns and the laws of optics and chemistry in order that the soil may be fertile, that the crops may move and currency become stabilized. Our primary schools with "little Latin and less Greek"—a disadvantage or otherwise according to one's antecedants and forbears, give us bookkeeping, manual training and arithmetic that we may wring a living or better—perhaps much better—from a grasping and uncharitable world. And after an education—well, we play a little, fight, grasp with the rest of them, live and pass out.

One wonders what the distinguished visitor from another planet would finally make of it all. Perhaps he would depart elated over the excellence of human achievements. Perhaps he would ponder sadly over a spectacle of strange mad creatures clawing and scratching one another's faces that each may achieve a greater success than the other. Surely he would perceive that our vaunted organization is to some degree to that end—that success is a comparative thing largely measured in dollars, that failure is lack of money and that true success is often so hidden that it is unrecognizable.

One wonders whether in the next century having arrived where we are, with the magic tools in our hands that science and industry have forged for us, we may try to achieve for the many what has been the lot of the few. Sufficient nutrition and clothing, good housing, freedom from disease—these should be first essentials—and why not training for happiness, sufficient recreation, work chosen because of our peculiar ability and talent rather than wily nily, training for marriage and marriage itself at a reasonable age.

But the visitor from Mars shakes his head and remarks that it is unlikely. Humans cannot desire these things because they haven't tried to get them. And as everybody knows, even in Mars, he who strives shall achieve if he only strives hard enough.

Current Literature Dealing With Venereal Diseases

These abstracts are available through the courtesy of American Social Hygiene Association.

Syphilis as an Economic Factor in Industry. By J. M. Quirk, *International Journal of Surgery,* Vol. 35, No. 5, May, 1922.

The author gives a general discussion of the history and prevalence of syphilis. Syphilis attacks every organ and tissue in the human body and simulates almost every known disease. Its lesions are not always easy to distinguish and the author states that they often have men reporting all sorts of injuries that are primarly due to syphilitic lesions. In its late manifestations with the involvement of the deeper tissues, we again have a serious economic charge against industry. The diseased bone of the syphilitic snaps in some slight injury and convalescence is prolonged beyond the normal limit. The case of syphilitic aortitis dies from some slight injury—industry pays. A trivial trauma to the head may be followed by an epileptiform attack common to syphilis, and industry pays. A neurosyphilitic loses muscular co-ordination or mental concentration, an accident occurs and industry pays. What shall industry do? Encourage education and treatment. Lecturers should be engaged, for lecturers are even more preferable than pamphlets, because many will listen to that which they are unwilling to read. The author recommends besides, prophylaxis and prophylactic education for industry.

Syphilis in General Practice. By Sir D'Arcy Power. *The Lancet,* Vol. ccii, No. 5152, May 27, 1922.

The author points out the various sources of possible error in the diagnosis of syphilis, made by general practitioners. He says that many physicians fail to make a correct diagnosis because of the social position of the patient or because of the unusual mode of infection. Other cases which go incorrectly diagnosed are those of congenial syphilitics who do not develop stigmata until maturity or until injured, when the stigmata sometimes appear. The physician should have a clear understanding of the modifying effect of syphilis upon other diseases. In concluding, Power calls attention to the fact that syphilis affects a sufficiently large number of the population to make it worth while to bear in mind the possibiliay of syphilis in many of the obscure and chronic inflammations which do not respond to the ordinary methods of treatment.

Neurorecurrences Following Treatment with Arsphenamin. By Ernest Zimmerman. *Archives of Dermatology and Syphilology,* Vol. 5, No. 6, June, 1922.

From the opening of the Syphilis Clinic of the John Hopkins Hospital in 1914 to September 1, 1921, 7,065 syphilitic patients have been treated. Of these, 1,400 were primary or early secondary cases. In this group, neurorecurrences have occurred in 23, or 1.64 per cent. Sixteen additional cases are included in this report, comprising patients who received initial treatment elsewhere and had already developed symptoms of neurosyphilis at the time of their first visit to the clinic, and those seen in the Syphilis Clinic of the Baltimore Eye, Ear and Throat Charity Hospital.

Dr. Zimmerman tabulates the sum of these cases which is 39, and discusses their symptomology, genesis, and prognosis. He finds that pathologically there are two types: a diffuse meningovascular process, and a process limited to one or more focalized lesions. In the former the spinal fluid is always abnormal, in the latter it may show marked abnormality or it may be entirely normal. Prophylaxis of such lesions depends on thorough mercurial treatment. It seems immaterial whether mercury is administered during or immediately following a course of arsphenamin.

Book Reviews

"Education in Health," by E. George Payne, Ph.D. Cloth, $1.00. Pp. 253. Chicago and New York: 1921. Lyons & Carnahan.

The manuscript for this book was prepared by a number of persons intimately identified with an educational experiment in Harris Teachers' College. The instructors in the various departments were in charge of committees. These committees initiated plans, organized the subject matter, and presented conclusions for the cossideration of the whole faculty. After full discussion the committee assembled for further discussion and experimentation. Therefore, this programme of education in health has stood the test of practical schoolroom experience.

"Graded Outlines in Hygiene," by W. F. Cobb. Cloth. $1.65. Pp. 214. Yonkers-on-the-Hudson, New York: World Book Co. 1922.

This book is a guide for teachers of hygiene in the kindergarten and junior grades. Definite suggestions show how to interest the child in health, and material is given to be presented at each lesson. This book should be valuable to health teachers.

"Rural Child Welfare," by Edward N. Clopper. Cloth. $3.00. Pp. 353. New York: The Macmillan Co. 1922.

A study of the relations of the rural child to his home, school and community. This investigation was conducted in West Virginia, but the practical results of the study are of general application.

"The Psychology of Nursing," by A. Cleveland Higgins. Cloth. $2.75. Pp. 337. New York: G. P. Putnam's Sons. 1921.

This could be made a useful textbook for a class of nurses if interpreted to them by a thorough master of the subject. The content of the book consists of a series of lessons on applied psychology, omitting the fundamental study from which these lessons are derived. It is written in a bright, attractive style and endeavours by means of quotations and references to introduce the reader to some of the great modern teachers of psychology.—E. K. Russell.

"Community Civics and Rural Life," by S. A. W. Dunn. Cloth. $1.50. Pp. 507. New York: D. C. Heath.

To teachers and others interested in the problem of making our schools the training grounds for citizenship, the book will be found rich in practical suggestions. Though written for use in American schools, it can be readily adapted to Canadian needs. As Mr. Dunn is Director of the American Junior Red Cross, and realizes that Junior Red Cross offers unexcelled opportunities for the practising of citizenship, the book should be of special interest to those active in Junior Red Cross Work.—S. B. McCready.

"A Form of Record for Hospital Social Service," by Gertrude L. Farmer. Boston: J. B. Lippincott Co. Price, $1.50.

In this book the author recognizes three important factors affecting the making of a Social History form: (1) That each hospital while having some common ground with other hospitals has essential differences. (2) The limited size of staff compared with the number of patients referred. (3) The time required for this part of the work. She choses the *individual* rather than the *family* case sheet, as cases are referred through illness and illness is of the individual with family background. This may become a family record by adding a Short Service or 5 x 8 record to the Extension Folder and indicating by a red star.

She advocates the selective process of history making—arranging under proper headings—as valuable in giving a word picture of problems involved. She also chooses the summary rather than the chronological form. Thus histories become more valuable in teaching and much unnecessary detail is omitted.

Her book is teeming with valuable illustrations and suggestions, but as yet few hospitals have a Social Service staff sufficiently large to permit one worker to devote her whole time to the supervision of history making which would be essential in successfully carrying out her scheme. J. M. K.

The Public Health Journal

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The Activities of the Research Laboratory in the Department of Health of Canada

NORMAN MACL. HARRIS, M.B.

Read before the Annual Meeting of the Canadian Public Health Association, St. John, N.B., June 8th, 1922.

THE passage of time brings changes everywhere, not alone to the individual, but also to groups, influencing modes of thought and lines of action, and causing the old to give way to the new.

Thus, with the passing of Bill 37 by the House of Commons on April 11th, 1919, under the title, "An Act Respecting the Department of Health," the old order gave way to the new and there was then established for the first time in the Government of Canada a Department of Health, with the Honourable Wesley Rowell as Minister.

In this connection it is not to be understood that the affairs of health had not previously been looked after officially by the Dominion Government. On the contrary, ever since Confederation, health matters had been supervised in part by the Departments respectively of Immigration and Agriculture, under the able guidance of such eminent men as Drs. F. Montizambert and Peter H. Bryce, whose work will ever remain a monument to their devotion and ability. But under the old system there was a lack of the co-ordinative efforts demanded by modern methods, particularly in reference to our interprovincial and international relationships, and to those of other governmental departments concerned in administering certain phases of public health control.

With the appointment, under the Act, of the Deputy Minister of Health, Dr. John A. Amyot, in August, 1919, the Department began to function, and divisions were organized, taking up one and another fields of activity, such as, Quarantine and Immigration, Food and Drugs, Control of Narcotics, Proprietary Medicines, Child Welfare, Marine Hospitals, Venereal Disease Control, whilst at the same time the already existing laboratory of the Dominion Analyst was incorporated in the Department. The research laboratory, however, was the last of the divisions to be formally established. This was done on July 21st, 1921, following the appointment of the writer as Chief of the Division of Medical Research. Since assuming control of the Division, the writer has been so often interrogated by both professional and lay friends as to what are the functions of the new established laboratory in the Federal Department of Health that he considered no time so opportune as the present in which to make a brief statement bearing upon such a question.

Fundamentally the functions of any of the Divisions are largely determined by the wording of the Department of Health Act. As it applies to the laboratory of the Department, section 4, sub-section (b) provides for "the establishment and maintenance of a national laboratory for public health and research work." Its scope is indicated in the further wording of section 4 as it applies in general to the duties and powers of the Minister administering the Department. Therefore, as occasion demands, the laboratory may be called upon to "co-operate" with the various provincial, territorial and other health authorities in the solution or elucidation of any problem presenting itself that has a bearing upon the preserving or improving of the public health.

One important part of the work of the Division will be focussed in investigation of bacteriological problems connected with raw, canned, dried, or preserved foods; the testing of the potency and sterility of curative sera, the sterility of vaccines; the potency testing of organic arsenical preparations; the testing of potency of other biological preparations, such as suprarenal and pituitary extracts, and the physiological activity of such important drugs as digitalis, strophanthus, ergot, etc.

So that the public may be adequately protected, investigation will be undertaken, also, of the claims of pharmaceutical manufacturers, or of exploiters, relative to the so-called values of new biological or chemical products.

As the Department has under its charge the medical inspection, quarantine and care of immigrants and sailors, and likewise administers the various Marine Hospitals, the laboratory will naturally be called upon to investigate and advise regarding measures to be taken to protect the health of the people of the Dominion against the importation of communicable diseases from overseas or from adjacent territories, and to study, if need be, any peculiar phases of disease among patients in Marine Hospitals.

The services of the laboratory may also be called for in matters affecting the health of employees in Federal buildings.

Problems connected with transportation, such as the sanitation of railway cars, steamboats and the like, and questions of streams and lakes pollution by them in relation to national public water supplies are included with the scope of the activities of the Division.

Questions arising out of enforcement of any of the regulations of the International Joint Commission in relation to boundary waters wherein the health of the inhabitants of Canada may be concerned, or where conditions arising on Canadian soil may lead to pollution of adjacent American waters, may present problems for the laboratory to solve. This will include, also, questions of possible pollution of international waterways by Canadian steamers, sailing vessels, or by railroads.

In the field of animal diseases that are capable of being transferred to man, the laboratory will be ready to join hands with the forces of the Veterinary Inspector-General in both combative effort and in pure research.

Research in the broad field of bacteriologic science will likewise be prosecuted, with particular reference to problems affecting the public health. In no sense will routine work, such as municipal or provincial laboratories undertake, be carried out.

The laboratory, it is hoped, will also be available for the giving of instruction to certain of the medical officers in the employment of the Dominion Government, enabling them to keep abreast of modern progress in laboratory work affecting their individual lines of service.

In matters of international public welfare, Canada is actively interested through the Department of Health, and it is expected that its Division of Medical Research will be prepared to co-operate in appropriate ways in the near future with the Public Health section of the League of Nations and with that influential active body, the Office Internationale d'Hygiene Publique.

With our neighbours south of the boundary line we are already on a basis of good relationship and active association, and will be prepared to work in unison with them on laboratory matters affecting the health of both communities.

At present, owing to the staff being incomplete and the laboratory itself only in temporary quarters, a beginning has been made in a modest way, but it is felt that even under present conditions a solid foundation is being laid for future and worthy achievements.

The Wirt Public Schools

THE Gary school system which Dr. William Wirt developed in the city that the United States Steel Corporation created in the midst of the picturesque sand dunes that border the southern shore of Lake Michigan, has received an unusual amount of attention from critics and investigators who have gone over the Wirt works singly or in groups within the past 16 years.

In spite of these investigations, and also because of them, the Wirt system has developed. Eight hundred other cities in the Unted States have benefited by it through the agency of the Bureau of Education in Washington, which, though avoiding all mention of Dr. Wirt or of Judge Gary, for whom the steel city received its name, has promoted Dr. Wirt's ideas wherever villages, towns, or cities sought assistance from the Federal Government.

All of the investigators advertised Dr. Wirt to the advantage of his system of public school education even when they were most severe. Newness in educational ideas is distasteful to many persons. Parents of Gary children were even bitter. They did not understand the Wirt ideas. He was by no means easy of access, and knew personally few fathers and mothers.

"The old system did very well, indeed," said some of these parents. "We got along finely with it. It produced all our presidents. Why go to the expense of putting in this new-fangled 'work-study-play' system?"

"Expense"—that was the idea. It was essential to consider expense. Dr. Wirt's school city grew fast. Money and more money was necessary. The State of Indiana allowed him $10 for each child. He took the school census annually, and sent the figures to Indianapolis. It would be fully a year before the allotment reached Dr. Wirt. It happened on three occasions that when the State appropriation reached the Gary school superintendent he had twice as many children to provide for as he had mentioned in his report. The city's population had doubled and instead of having $10 to spend on each child he had but $5. Expense was of more moment to him than it was to the parent.

Though Dr. Wirt did spend millions on his system he got more for the city through his new plan than he could have gotten through any of the older systems. Some investigators say he got 70 per cent. more through his way than the old ways could have given.

His principal economy was in using the whole school all the time. Every department in the Wirt schools is busy all of the school day, and this day is eight hours, which should be the limit of any working day. The auditorium, for instance, is not, or before Dr. Wirt's day, was not in use more than a half hour each day unless special exercises were in order.

Dr. Wirt keeps the auditorium very busy indeed. Excepting the luncheon period there are always some hundreds of children there. They listen to platform talks and learn to speak from the platform themselves. They learn to think on their feet and facing an audience. Stage fright is not for them in after years. They are immune.

So with the play grounds. Unless weather prevents the grounds are as busy as the auditorium. This gave critics occasion for comment. "All the children do is to play," declared one mother. "I never pass, rain or shine, that those kids aren't out romping round." She was half right. Children are on the playground long before the opening hour; and all day long until 9 o'clock at night, there will be children there as joyous as children well can be, but not the same children.

Playing is part of the Wirt curriculum. There is someone in charge all the time—a good teacher of games who enlarges the world of fun and restrains only when restraint is necessary. The several grades appear for outdoor work and games in turn through the day just as they have a schedule for auditorium, for the shops, for the gym and for the class rooms and the swimming pools.

The pools are busy all day, so are the gyms, the shops and the class rooms. And one may hear some thirty different languages in some of these class rooms any day in the week. English is the Gary school child's Esperanto; the homes he represents are from diverse countries, and through English only can they exchange ideas.

With regard to his schools Dr. Wirt is more than emphatic on one point. He insists that the schools belong to the people for the people paid for them. They are open Sundays and holidays for public use. Indeed, at any time the public wishes to use school facilities it may do so free of charge so long as the children themselves do not need them. Children come first.

This is shown very prettily at times. Dr. Wirt, probably does not know by name a score of the children he is making into first-class citizens. He isolates himself. But he has the good of the "kiddies" at heart, nevertheless, day in and day out. The youngsters would not know him if they met him on the street. Some do not know whom you are talking about when you say "Wirt," and have no idea at all how he functions, but they do know that the school building and the grounds, in several instances 20 acres, that surround the schools, are for them to use.

They give many picnics in these grounds. They use the school kitchens to prepare their food. They use the gyms for their dances and they have parties in the sewing rooms. There are no charges. Also, the school gardens are theirs. They grow what they like; sell it, give it away, or eat it at home if it is garden truck. A girl in one of the Wirt schools, assisted by her small brother and his "express" wagon, took vegetables to market opposite the City Hall all through the season. From these sales she deposited in the National Bank of America, of which Dr. Wirt is president, $114.65.

Speakers from the world over avail themselves of the hospitality of the Wirt schools to address audiences of many different nationalities in many different languages. All sorts of societies representing races that Americans in other cities would not recognize by name, hold meetings in the public school auditoriums.

"They pay school taxes; the schools are their property," says Dr. Wirt, and so, even in the "portables" which emergency often calls for and which the Doctor buys in quantities in Seattle, Washington, and brings to Gary, there is oft "the sound of revelry by night."

It is also Dr. Wirt's idea to employ specialists as much as possible. This calls for departments. The Rockerfeller Foundation spent some $60,000 investigating these departments to their benefit all Gary school teachers now grant.

It took time to bring them to their present state of effectiveness. Each department has a head. Under him or her are teachers who keep to one line of endeavor. The pupils move about from room to room as the hours call, going from the arithmetic teacher to the geography teacher and thence on to the grammar teacher, the history teacher, the shop, the playground and the gym.

The new comer sees confusion in all this, and says so, but a good result of the changing about is that the several teachers have the same children in the special subjects year after year, and through prolonged acquaintance with each pupil get more out of each.

These are a few of the characteristics of the Wirt system which has undergone an extraordinary amount of criticism for a dozen years and more, and is spreading and prospering. It was born far from perfect, as far as is any other infant, but it is lusty. Dr. Wirt has developed it by constant care, so that its promise of a splendid manhood—a manhood of true citizenship is assured.

In closing, it is well to say that while religious instruction in any sectarian sense is not allowed in the schools, Dr. Wirt has instituted a system for the teaching of the broad principles of religion and morality, and has further arranged that any child may attend any of the several church schools in Gary that the parents may elect. He himself is a Methodist, as is his wife, who is a graduate of the Gary system, and was for several years his secretary. His oldest son Franz is a brilliant naval officer, and his other children a boy and a girl, are in the system still, with no favors shown, but making good emphatically.

The Training of Sub-normal Children

BY DR. ELIZA BRISON, *Halifax, N.S.*

Read before the Canadian Public Health Congress, St. John, N.B., June 8, 1922.

THE first known attempt to educate a mentally deficient person was in the year 1800 when Itard, physician in chief to the National Institution for the deaf and dumb in Paris, undertook the training of a boy, who had been found in the forest of Averyon. This boy gave few marks of intelligence, walked sometimes on all fours, fought with his teeth, and had no articulate language. Itard, who did not believe that idiots were curable thought that this boy was a savage. So in devoting himself to this case, his object was not to improve or cure an idiot; it was to solve the meta-physical problem of determining what might be the degree of intelligence, and the nature of ideas in a lad, who, deprived from birth of all education, should have lived entirely separated from the individuals of his kind. Itard endeavoured for five years to develop the intelligence of his pupil; but becoming finally convinced that the boy was an idiot, gave up the attempt to educate him. Several attempts were made to teach others of more intelligence, both in America and in France; but they were not successful enough to be continued.

In 1837 Dr. Edward Seguin, a pupil of Itard, began the private instruction of idiots at his own expense. He continued his school in Paris until the Revolution in 1846, when he came to America, where he was the means of establishing several schools for idiots. In 1846 Dr. Seguin published his "Treatise of Idiocy." This book gives in an elaborate and systematic manner, the training of the defective brain by the physiological method, that is by the training of the special senses and the muscular system. His principles of education were at first thought visionary, but for many years his methods have been adopted by all schools that make an effort to teach the feeble minded. Dr. Seguin devoted his whole life to the bringing of light into these darkened lives, and when in 1854 he was privileged to be present at the laying of the cornerstone of the first school in America built expressly for idiots, at Syracuse, N.Y., it must have been with the deepest gratification that he saw recognized at last the claims of this most afflicted class of humanity;

and with a heart overflowing with love, he exclaimed: "To see that stone—token of a new alliance between humanity and a class hitherto neglected, is the greatest joy of my life."

Rev. Samuel May, nearly 100 years ago, expressed the feeling of his time when he said, "The time would come when access would be found to the idiotic brain; the light of intelligence admitted into its dark chambers, and the whole race be benefited by some new discovery on the nature of mind"; and about twenty-five years later Seguin said "Idiots have been improved, educated and even cured."

Although it has been known for many years, that an individual born with a defective mind cannot be cured, this knowledge gives us no reason for a lack of interest in their training. Indeed greater efforts should be made, since we are finding out what a power for evil they can be on account of their incurability, and in their untrained state. By all laws of right and justice, feeble-minded children should be given the same opportunities (according to their ability) for education, that is given their normal brothers and sisters. And all except the lowest grade, or absolute idiot, have some latent possibilities that can be cultivated. This is the aim of education, together with the repression and elimination of the vices; therefore, unless they have the proper training during their childhood and youth, they will be a serious burden to the country—a burden both in regard to what they do, and to what they do not do.

Until comparatively recent years "idiocy" referred to all the graver mental defects; now we use the descriptive terms "mental-defective" and "feeble-minded." They apply to all degrees of congenital defect, from the high grade child not far below normal to the lowest grade or absolute idiot.

The following data give a little idea of the prevalence of mental subnormality in some of our reformatory institutions, and of the need of more enlightened treatment: The mental examinations of 92 girls and boys in two of the reform schools in Nova Scotia shew 26 feeble-minded, 23 borderline cases, that is below normal; but with a little more intelligence than that possessed by a feeble-minded person, and 43 normal cases, which gives 28 per cent. feeble-minded, and altogether 53 per cent., who are mentally subnormal, and have not enough judgment and will power to keep them out of mischief. From personal work and observations among delinquents in Nova Scotia, the percentage of subnormal delinquents is usually in the neighborhood of 50 per cent. So nearly half of the inmates in our reformatories will benefit very little from their confinement there, are a pernicious influence on the normal boys and girls, and a big expense to the country. With normal youthful offenders, the cause of delinquency is usually attributable to poor environment, as deplorable home conditions or bad associates, and a term of two or three years in a well-conducted reformatory is often just what these young people need. The justice of being punished for misdeeds, healthy surroundings and sufficient work must have a lasting influence for good on normal individuals; but on subnormals the effect is very different. Many do not know why they are punished; and it is rare to find a child of low mentality who does not resent correction; and those who have intelligence enough to understand, have such weak powers of resistance, that when not under restraint, they will easily become tools for unscrupulous persons. Even fear of what may follow or promises of reward cannot keep them from wrong doing. Here are a few cases which are not unusual, and will show the tendency of the untrained feeble-minded:

CASE 1. A high grade feeble-minded girl—a moron, age 20, mental age 10 years, good home, although mother is dead, neat and attractive appearance. For the last five years she has been disappearing from home for about four or five days at a time. This happens about every two months and she stays away until found by friends or the police. She always arrives home in a dirty exhausted condition, and will not talk of where she has been or what she has been doing. Several times she has been found on the street late at night; and it is believed that she was out for immoral purposes. Twice her father has had her confined in institutions, hoping that she might be helped to overcome her dreadful habits; then she would make so many promises of future good behavior, that her father, not listening to advice, would be sure that she would do better; but instead of being reformed, she is becoming more clever in eluding her family and the police. Although lazy and untruthful, she is very likeable, and has many friends among younger children.

CASE 2. A feeble-minded girl, age about 16 years, mental age 9 years, was committed to a reformatory for a serious sexual offence, and was detained there for nearly four years. Great efforts were made to help her, and she received much religious and moral training. At last it was decided to allow her to have a chance; but on the very day she was released, she started again her life of crime, and within a year became a mother.

CASE 3. A 15-year-old boy, borderline deficiency, committed for stealing. When his year was nearly up he got out the fire escape one night and was in the act of breaking into a nearby store, when he was caught. It was some time after this that he was allowed his freedom, but was only out for a short time, when he had to be committed to the school again for stealing.

The object of moral training of the normal youth is the inculcation of the love of righteousness. The young defective must get the habit of righteousness by long years of training.

Rousseau said in referring to the education of his time, "Do just the opposite of what has been done and you will do right." His advice seems to fit our period in regard to the treatment and training of the feeble-minded.

If anything can be done to train these persons to become more social in their behavior, and of more economic value to the country, to say nothing of adding happiness to their own lives, it is our duty, just as in treating bodily disease or defect, to use skilled methods that will obtain the best results.

The training should begin just as soon as it is found that the child is mentally deficient. The mother, if she has normal intelligence, usually knows quite early that her baby is not like other children. A baby of seven months should be able to balance its head, to turn its head towards a source of sound as bell or voice, to reach for objects, and to hold them when placed in the hand, and to oppose the thumb in grasping. The average child will do these things in six months. A normal child of one year sits and stands without support, tries to repeat or imitate syllables, imitates some simple movements, and recognizes objects. If at this age the child cannot sit, stand or balance its head, and will not grasp or hold objects, and does not turn its head when spoken to, it does not take a psychologist to diagnose the condition as extreme backwardness. When the mother goes to her family physician for advice, she fears but almost expects that he will tell her this. And it is not a kindness to say that probably the child will grow out of it in a few years. The mother of a mentally defective child has a big task ahead of her; and the sooner she knows of the defect the better; and as in the case of her normal child, she should not expect to do the work alone. After a certain period of home training, the school should take its place in helping to mould the young life. But until the time when the child can be under the care of specially trained teachers, the mother, guided intelligently by the doctor or nurse, should do her part, so that when the child reaches adult life he will not be useless, or worse, a danger and a menace to the community.

When the little hands are flabby, they must be encouraged to hold objects, especially bright-colored objects that appeal to the eye. The muscles of the thigh and leg, that in a normal infant are made strong by kicking and squirming, must be encouraged to exercise by the mother, who trains and helps the little one to walk. When the child is listless, it should be given bright and attractive toys, and helped to play. The following is one of Dr. Seguin's methods of correcting faulty habits: After he has learned to walk, he will probably drag his feet. This habit can be partly or wholly overcome by having him walk over the rungs of a ladder, which is placed on the floor, the child stepping between the rungs. This will teach him to lift his feet; and, too, it will be a play for him. These first lessons are always discouraging to mother or teacher; but patience and an understanding of the little one's capacity will finally secure results that are sometimes wonderful. The mother should be made to realize that by teaching her child to dress himself, and to do simple tasks, instead of doing everything for him; and by demanding a willing and prompt obedience, she is making him less of a burden to her, and is beginning his moral training. Seguin says: "It is true that his habits are sad, droll or repulsive, that his doings are often worse than none; but these manifestations exhibit as much the carelessness and want of intelligence of the parents or keepers, as they do the primary character of the infirmity. Does not the idiot in making his silly gestures tacitly say, 'See what I am doing, if you knew how to teach me better and more, I would do it'."

In order to make the child think and reason, the special senses need training, as in developing the sense of touch. Let the child feel a hot object, then a cold one, or a wet object, and a dry, then a rough and smooth; doing this over and over until the contrasting sensations make an impression on the mind. In developing the sense of taste, the child is given that which is sweet, sour, salt and bitter until he has learned that there is a difference; although he should not be expected to express it in words until he has reached the mental age of seven years; but very early in life his brain should register a difference. In a similar manner the other senses are trained. In a normal child the sense development is natural; but the subnormal child has not that inherent capacity for development. It is through the hands performing some task, the eyes seeing objects and conveying impressions to the brain, and by various other sense impressions, that the child gets the habit of thinking.

Handwork is useful in training muscles that are unsteady, as in threading beads, sewing on paper and cloth, knitting and simple wood-work. Weaving has been found to be very useful in controlling the moods of children of unstable mental equilibrium. Indeed, a very considerable number of the feeble-minded lack balance. In weaving, the muscles all over the body are brought into play, mind and eye are kept busy; and very soon the one who is irritable and in a bad temper forgets his trouble, and is happily working. One girl in our home, whose muscular action is very poor, can weave, sweep, make beds, and do many kinds of work that require large motions; but she cannot thread a needle, and is just beginning to knit after three years of training. Although she has known for some time how to knit, the motions were too complex for her fingers. At first, in making baskets she broke all the spokes—now she is one of the best basket-makers in the home. She will never be capable of taking care of herself on account of her low mentality and unmoral tendencies; but when she is a little older, she could be almost self-supporting in an institution. At 13 years, with a mental age of seven, she came to us useless, quarrelsome, with an almost insane temper, and a nervous habit of staying awake and roaming about the house until late at night. Now she sleeps and works well, and her disposition is as good as that of the average child. We attribute the change in her condition to wholesome environment, and enough work and play to keep her healthy and happy. It sounds simple, and it has been more simple than the next case of a girl of lower mentality. This girl was fourteen when she was admitted; mental age 4½ years, both parents mentally subnormal. She had low tastes, repulsive habits and negative disposition. At first to watch this poor low grade creature, one would feel sure that time and labor would be wasted if spent on such a specimen of humanity, and in that word we have the reason for our labor of love. She is a human being and she must be lifted up, if ever so little, from her state of ignorance and degradation. After a while we noticed that she had three good qualities, crude and undeveloped though they were—an affectionate nature, ambition and carefulness of her own belongings. These qualities were a big help in her training. She had very good muscular action, although her hands were untrained and useless. Work that included the coarser and larger movements was first begun, as dusting, weaving and simple basketry, then more complicated work as knitting, sewing, crocheting and more difficult housework, until now, after only 3½ years of training, she has become a useful member of the household, doing her work faithfully and well. Often she is found just quivering with happiness because she has accomplished something new, or she has learned how to do some work that she has been trying so hard for months to do, and we are amply paid for days of discouragement and seemingly hopeless work by hearing her delighted screams of "I'm learning! I'm learning!" She is still far from being an ideal child and has many bad habits that it may be impossible for her to overcome. If back in her old environment, she would, no doubt, in a short time go back to her old manner of living. Her mental condition is not much higher than it was before, but the little intelligence that she has is in process of training, and bye and bye, if she is fortunate enough to remain in a training school, she will probably for many years contribute largely to her own support, and will be happy and contented. Otherwise we see nothing ahead but a life of misery, wretchedness and immorality.

There are many similar to these, who, although they form good habits of work and of living, have such low mentality, and are so unmoral, that they are not safe or useful when not under supervision. Not all children with a mental age as low as 4½ or 5 years could be taught to be as useful as the above example, no matter how perfect the training; and some could be taught to be more useful and less disagreeable in their habits. Dr. Fernald, of the Massachusetts School for Feeble Minded, once assembled in a room 252 individuals with a mental age of eight years. He says of them: "The individuals in this group varied in physical age from 12 to 50 years. Some of them had learned to read, while others had not been able to do so; some were capable of elementary computations, while others found the simplest concept of numbers almost beyond their capacity. We had been able to develop some of them to become fairly expert mechanics; but others were able to do only the simplest sort of manual labor. Some were conscientious and relatively trustworthy; others were most untruthful,dishonest and unmoral. In some, sex proclivities seemed to be the dominant interest, while in others, the sex interest seemed to be normal. This variability shows that a measurable intellectual level is not the only factor in the study of the feeble-minded, and in the working out of the type of case, and training that they need."

If we should examine the brains of different persons of the same mental age, we would find that the lesions of the central nervous system, which cause the mental defect, vary as greatly as the behaviour characteristics of the group. And this from the teaching of Froebel: "The amount of development possible in any particular case, plainly depends on the original outfit, and partly on the opportunities there have been for exercise, and the use made of those opportunities. If we wish to develop the hand, we must exercise the hand; if we wish to develop the body, we must exercise the body; if we wish to develop the mind, we must exercise the mind; if we wish to develop the whole human being, we must exercise the whole human being. But only that exercise which is always in harmony with the nature of the thing, and which is always proportioned to the strength of the thing, produces true development."

The tendency to lead dissolute lives is especially noticeable in the high grade female. A feeble-minded girl has not sense enough to protect herself, and often by being bright and attractive, she is subjected to greater peril. It has been found that by keeping this type of girl under supervision, and training for ten or fifteen years, that is if the training is started very young, she will acquire such good moral and industrious habits, that in private homes where temptations are not too great, many will go on living useful and respectable lives. It is not so much that they have learned to distinguish right from wrong, for their will power and judgment are still very weak; but the habits of constant occupation and proper recreation have become fixed in the minds and lives of these girls, and their immoral tendencies, through disuse, are undeveloped.

The prospects are even brighter in the training of high grade boys. Nearly all who have been trained from childhood have been taught habits of industry and good behavior that will go with them through life. There are some mental defectives, however, on which years of training, even in an institution, have apparently little moral effect. This is the class that would come under the heading of "moral imbecile." In the Mental Deficiency Act of England the moral imbeciles are defined as "persons, who from an early age, display some permanent mental defect, coupled with strong vicious, or criminal propensities, on which punishment has had little or no deterent effect."

Special classes should be organized in the public schools for the backward and feeble-minded, not only for their own benefit, but for the sake of the brighter pupils in the school. In order to teach backward children in a class, they naturally get more than their share of attention from the teacher, and that hinders the progress of the others. The backward pupils, themselves, in an ordinary school, are not getting the training they need, for too much academic work is injurious to their weak minds. Their teaching must of necessity be very simple, and consist of reading, writing, nature study, language and numbers. It is worth while for them to go to school even though they can never learn to read and write, and for many it is only a waste of time to try to teach them these subjects, but it is no waste of time to teach them kindness and courtesy, personal cleanliness, physical training, music and handwork.

Industrial training, besides being an educational factor of considerable importance, is a means of keeping their minds pure and their hands out of mischief, and of turning their energy to practical account. If it be possible they should be taught some definite occupation.

In many of our cities, we have Special Classes for the subnormal, and the good that they are doing will far exceed their cost. Especially is this true of the very young, who will probably have 10 years or more of training.

We have heard of the wonderful work of the large number of auxiliary classes in Vancouver, where truancy is almost unknown. And we believe that in the years to come, that city will reap unheard of results, in the diminution of crime, and conservation of labor.

By humane and just treatment of an unfortunate and neglected class, who have sinned against themselves and the community because they were not taught the betteer way, the country will only exhibit a little of the wisdom that has been handed down to us from Solomon: "Righteousness exalteth a nation, but sin is a reproach to any people."

Soil Pollution*

By F. A. Dallyn, Toronto.

Read at the Ontario Health Officers' Association Convention, in Toronto, on May 29th and 30th, 1922.

DISCUSSIONS of soil pollution are generally limited to those types of pollution, which might have some relation to the spread of intestinal infections. Pollution of this character mainly arises from the solution or the distribution of faecal matter, introduced into the various types of privies and septic tank methods of sewage disposal. That such wastes have been popularly accepted as a source of danger is evident from the fact that there is considerable legislation on the Statute books relating to the rights of local councils of municipalities to pass by-laws:

(1) For regulating the construction of cellars, sinks, cesspools, water closets, earth closets, privies and privy vaults; for requiring and regulating the manner of the draining, cleaning and clearing and disposing of the contents of them.

(2) For requiring the use, within the municipality or a defined area of it, of dry earth closets.

(3) For providing that the cleaning and disposing of the contents of cesspools, water closets, earth closets, privies and privy vaults shall be done exclusively by the corporation.

(4) For requiring and regulating the filling up, draining, cleaning, clearing of any grounds, yards and vacant lots and the altering, relaying or repairing of private drains.

(5) For requiring owners, lessees and occupants of land in the municipality or any defined area of it to close or fill up water closets, privies, privy vaults, wells or cesspools, the continuance of which may, in the opinion of the Council or Medical Health Office, be dangerous to health.

(6) For establishing, protecting, regulating and cleaning public and private wells, reservoirs and other public and private conveniences for the supply of water; for prohibiting the fouling of them, or the wasting of the water, and for procuring an

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*"Investigation on Soil Pollution and the Relation of the Various Types of Privies to the Spread of Intestinal Infections." October 10, 1921, the Rockefeller Institute for Medical Research.

analysis of such water, and providing for the payment of the expenses thereof, and for making reasonable charges for the use of the public water.

(7) For the closing or filling up of public or private wells.

(8) For compelling the use within the municipality or any defined area therein, for drinking and domestic purposes of water supplied from the waterworks of the municipality or of a waterworks company; and for prohibiting the use within the municipality or such area of spring or well water for such purposes.

In addition to the diverse complaints which are popularly conceived to arise directly from soil pollution, there is the direct danger resulting from the use of polluted well supplies.

Without discussing the question for the moment as to how this polluting matter obtains access to the drinking water supply or the well, it is interesting to note that the legislation referred to contains numerous references which specifically relate to the control by the Council of a municipality of the public and private water supplies for drinking and domestic purposes within the municipality.

Despite the fact that the legislation is quite comprehensive on this subject, there appears to be little or no advantage taken in many municipalities of the fact, although the private well supplies frequently are seriously polluted.

Whether there is a general agreement or not as to the presence or absence of serious soil pollution in the vicinity of earth closets, privies and privy vaults and sink holes for wash water, there could be no question but what close proximity of such structures to private wells is wholly undesirable. Within the last three years, the Board has, through the Sanitary Engineering Department, conducted a number of sanitary surveys and has depicted on maps which have been arranged in the lobby for your information the conditions found to be existing in the various municipalities examined. These surveys reveal the fact that pretty nearly 80 per cent. of the private wells in the urban or semi-urban areas are seriously polluted. We may not all agree as to the source of this pollution, nor even as to the actual danger from the presence of this pollution; one must, however, admit the fact that the pollution is there, and in quantities that if not dangerous are at least rather nauseating.

The question is frequently advanced that if this pollution constituted danger, why do we not have more typhoid and enteric fevers from the use of this water. There are numerous explanations for this phenomena; the most obvious, of course, being that the discharge of persons suffering from these diseases has never had access to the well supply. Another is, and possibly the most common explanation, that there has been a great deal of such disorders unrecognized as coming from the use of such water, and that in view of the confined number of persons affected, a certain immunity has been developed.

One very frequently hears that so-and-so on going to the country is very much affected by the water supply, whereas the local people using the water feel no such effects. A further explanation is that much of the pollution is of animal origin, and that animals do not transmit such diseases as typhoid fever. This is especially true in the country.

The research work that has been done in connection with the longevity of pathogenic organisms, also, tends to throw some light on the subject and suggests that one of the reasons why more disease is not directly traceable to well supplies is owing to the fact that pathogenic organisms outside the human habitat are extremely short lived and in consequence the storage of water, either in the ground or in a well itself has some controlling influence. Sir Alex. Houston, one of the recognized authorities in the Old Land used to say that even in connection with the use of the River Thames, if he were aware of typhoid outbreaks accompanying its use, he would be prone to look very close to the intake for the special source of pollution occasioning the epidemic; and I think it may be accepted as a criticism that Public Health Officers to-day are possibly inclined to look a little too far afield for the immediate cause of some of the intestinal outbreaks under their observation. The effect of storage which is probably the greatest factor in the control of soil pollution and one that could be taken more advantage of has been recently somewhat illuminated by studies in the behaviour of different types of bacteria in soils having a different hydrogen ion concentration.

There has been a great deal of information advanced by laboratories during the past ten or fifteen years, on the subject, storage and longevity of pathogenic organisms, commencing with the investigation that was carried on in connection with the Chicago drainage canal and including that done by Sir Alex. Houston and the Metropolitan Water Board of London, Eng., the findings of which were somewhat at variance.

The effect of the hydrogen ion concentration which has been only recently observed and only been discussed in literature within the last two years, may be the explanation which will assist in correlating the various bits of research that have been carried on in widely scattered centres. It has been shown, for instance, that our natural waters vary in hydrogen ion concentration, from an Hp. value of about 4 to an Hp. value in excess of 8. It has, also, been shown and referred to in the Monograph, Number 15, of the Rockefeller Institute, page 25, that the viability of typhoid and dysentery bacilli are markedly affected by the Hp. value of the soil, in which it is attempted to cultivate them.

The effect of a low Hp. value was such as to reduce within 24 hours the initial numbers by approximately 90 per cent., whereas the higher values up to 7.6 did not show an appreciable effect within six to ten days. At 8.6 and over, the bacilli in another group of experiments died out rapidly and were recovered only on the fifth and third day, the discrepancies, therefore, between the work reported on in the earlier efforts may be accounted for by some factor such as the hydrogen ion concentration, which apparently is of considerable moment. The hydrogen ion concentration which has quite a terrifying sound to many of us, is the measure of the acidity or alkalinity of a material in terms of its reaction on certain dyes and a buffer salt. A hydrogen concentration of (7) is a neutral solution. Above (7) the solution is alkaline and numbers below (7) would indicate that the solution has an acid reaction according to this method of determination. Many of our cultural medias are now being prepared and checked by the hydrogen ion concentration tests. This is a much safer method than that hitherto adopted.

Aside from the direct effect of the longevity factor and of the hydrogen ion concentration, you have the benefit of these two on retarding the penetration of the organisms in the soil. You can readily perceive, therefore, that soil pollution is not an accumulative thing and that the controlling factors tend to limit the penetration or the distance which polluting organisms may travel from any real source of danger after finally reaching the soil. Quoting from the work of Mr. I. J. Kligler, "The seepage into the soil from septic pits,"—Pit A was located in hard, clay soil with a water table about 30 feet below the surface. As in the case in the dry pits the only pollution that could be detected was that due to soakage, owing no doubt to its long continued use and the large amount of water present in the hole. The pollution was found at a point 5 feet away from the pit, whereas in dry pits it extended only 3 feet. Pit B, on the other hand, although the same type of hard, clay soil was immediately above a sandstone ledge, which was only 3 feet below the surface and which created a water table at that level. This water table although apparently static was evidently connected with the drilled pump and contributed a constant stream of pollution to the well. By actual soil tests it was possible to trace the pollution a distance of 18 feet from the pit. Whenever a stratum of sandstone was struck in boring the soil, the sample was found to be polluted. The course of the seepage was unmistakable. Of the three types of soil studied, the clay soil shows a relatively smaller number of polluted samples than either of the other two, and the sandy soil the greatest number. Of some 17 pits studied in sand, 9 of them showed pollution five or more feet from the pit; Six showed the absence of pollution five feet from the pit. In sandy clay, 9 showed an absence at five feet, out of the fifteen examined. And in the clay 8 showed an absence out of eleven examined, at five feet.

The report goes on to show that certain workers,—Firth and Horlocks were unable to wash bacillus typhosus from two feet of compact soil with rain at an intensity of 3.5 inches per hour, falling for five hours. Certain other types of bacteria, however, such as bacillus prodigiosus were shown by Elba and co-workers to be washed through two to three metres of soil. The general conclusion of I. J. Kligler, was that water could carry bacteria through two feet of soil, but not through three feet. This conclusion, however, does not agree with some of the direct observations in the field, which would indicate that pump drippings near a well can readily carry B. Coli down a considerable depth, so that driven wells 14 to 15 feet deep frequently show gross pollution. The observation that the bacteria will readily penetrate two to three feet in the soil as a result of soakage, would indicate that curbing around dug wells is not satisfactory unless carried down by means of vitrified pipe for at least five feet. It is interesting to note that in the summary of the investigations, the author reports that the subsoil below two feet is generally free from contamination, but that during the rainy season the pollution may extend downward about five feet. This is, also, borne out by several contributions in the discussion of the paper. All this points to the fact that septic tanks or septic pits which are kept well above the water table will not probably pollute the adjoining wells, but as soon as the water table is reached the pollution may travel a considerable distance. This latter observation is of particular moment to the Medical Officer of Health, in view of the fact that despite regulations to the contrary, a few persons will take advantage of disused wells for the disposal of waste water from their sanitary fixtures. How far such pollution will travel is unknown. I understand that the municipal wells at Listowel, were affected from such a source and the contamination did not lessen until the practice was discovered and corrected.

Therefore, studies of soil pollution suggest that there is no real danger from it other than that which would influence some adjoining well supply. They also, indicate or suggest that where a municipality is disposing of considerable amounts of water from flush closets that the use of private wells should be prohibited and that the municipal supply should be improved so that there would be no tendency on the part of the property-owners to retain their wells in order to get clear, cold water.

Social Hygiene in British Columbia

INTEREST IN SOCIAL HYGIENE INCREASES—THE VANCOUVER ISLAND COUNCIL PLANNING EXTENSIVE PROGRAMME.

THE following brief report is reprinted from the Victoria Times of August 5th. The progress shown by the British Columbia Social Hygiene Council should be of interest to other Social Hygiene Councils throughout Canada.

Encouraging reports of steady progress were received at a recent meeting of the executive committee of the Island Council, held under the presidency of Dr. Thomas Miller.

Some fifteen public meetings have been addressed in and around Victoria during the past four months, which has resulted in wider interest in the work. There had been also a large number of conferences with selected groups, which have been going on quietly for some time, with a view to beginning a vigorous campaign during the coming autumn in order to bring the serious consideration of the questions involved in this problem to all sections of the community. As one result of these preliminary discussions certain organizations have undertaken a series of group meetings suitable for men and for women, and for younger men and for younger women. Apart from such general meetings as may be called for, it is intended to work mainly through this group system of smaller gatherings.

Two cartoon exhibits, dealing with the proper methods of health and care of the body, and illustrating wise methods of teaching elder boys and girls, have been secured. These should be of great value in the educational work, and especially for parents' conferences. Sixteen meetings have already been arranged for September and October in the city and vicinity, and others are pending. Everything seemed to point to a season of prolonged activity, and much greater interest was being shown in the work of the council.

Beginning in October, the Council will hold monthly meetings (to discuss various aspects of the question), which will be open to the public. The dates of these meetings will be advertised in the press, and it is hoped that those interested in the work will attend.

Measures were taken for spreading more widely a knowledge of the dangers, and of the only right methods of cure, as well as of the means of free treatment afforded by the Government dispensary in Victoria and in Vancouver.

Arrangements have been made for an active forward movement in Nanaimo through a local committee, and the Cowichan Health Centre Committee will act as the agent of the council there.

Reports were received of the work of the Provincial Council showing the extension of the work in the interior of the Province, and of the annual meeting of the Canadian National Council recently held in St. John, which showed steady growth throughout Canada. At the latter meeting, British Columbia was commended for the soundness of its educational work, and for the financial support given by its Government for the prosecution of the campaign.

The demand for literature still continues to be heavy, and it has been found necessary to reprint several of the pamphlets for the third time. In addition some new pamphlets are being prepared for distribution. The secretary, Rev. H. T. Archbold, 434 Quebec Street, city, will be glad to send copies of all literature issued by the council to those who ask for it, as well as to answer any enquiries addressed to him. He will be glad to arrange meetings, or to have addresses given on social hygiene, on request.

Social Investigation and Follow Up in Venereal Diseases Cases

By Dr. Gordon Bates, *General Secretary, Canadian National Council for Combating Venereal Diseases.*

THIS particular aspect of the venereal disease question is very important. In this public health problem more than in any other like problem with which we are faced social factors are at work—factors whose operation we must understand if we are to organize properly to defend ourselves against a menace which, unchecked, threatens to destroy civilization itself. True, for several years now we have heard statistics quoted as to the tremendous cost in human wastage envolved in the widespread existence of venereal disease throughout the world. The Insane Asylum, the hospital, the institution for the blind, the poorhouse, the reformatory and the divorce court all supply eloquent evidence of the futility of attempting to cope with the situation by trying to repair the damage due to venereal disease after it has occurred. Among legislators and citizens at large only a few realize even this. Few of us, indeed, understand anything of the complex social factors which are envolved in creating an appalling condition of affairs.

In spite of general lack of public information we have made progress. In various countries we have done the thing which obviously should be done first, we have at least recognized the existence of widespread and dangerous disease and have provided facilities for treatment. Government grants in various countries have made it possible to establish clinics. There has been considerable propaganda. As a result thousands of infected persons have come forward for treatment and unquestionably many deaths and serious disabling end results. have been prevented.

Nevertheless, only the fringe of the question has been touched. Only a fraction of the existing cases have been brought under treatment. Hundreds of thousands of new cases are being infected yearly and tremendous damage results and still our understanding of the fundamentals envolved is limited. Perhaps, a few workers in clinics and hospitals feel that they have some vision of the reforms medical, educational and social which are necessary for the future, but even they are hampered in their action by the lack of information available as to the underlying causes of it all.

Nor are all the efforts possible being made to bring existing cases under treatment. One person suffering from venereal disease applying to a physician of a clinic for treatment means another person from whom the disease was contracted. Again a single prostitute suffering from gonorrhoea or syphilis may have infected many patrons before she realized the seriousness of her condition. The married man coming up for treatment may have infected his wife and children, often in ignorance of his own infection. All of these sources or contacts at large mean the possibility of serious end results for the infected individual, blindness, perhaps—or apoplexy—or insanity or any of the serious mishaps which sooner or later are likely to be the lot of the unfortunate infected with the germs of gonorrhoea or syphilis. Besides each is a definite focus whence other new cases may arise. The infected patron of the prostitute carries the infection to another woman or he marries and infects his wife and hence his children. One child may infect another, or in a children's hospital many other children —and so the endless chain goes on—each infected person a link unless his or her infection is destroyed.

It is true, as I have suggested, that information on the subject is more general. Propaganda has meant that persons with obvious symptoms have tended to realize the seriousness of their state and apply for treatment. Persons who have exposed themselves by immoral conduct and who have suspicious symptoms also may apply for treatment—not all, because many are foolish and careless.

Others there are whom propaganda does not touch—the thousands who are unaware of their infection because they have had no symptoms—or who being aware suppose that they are cured. The child with a hidden syphilis rapidly developing into an interstitial keratitis; the immoral man and woman spreading infection but innocent of knowledge of the fact that they are spreading it. The man in middle age without symptoms suffering from syphilis which sooner or later will kill him and rob the community of a useful citizen, serenly unaware of his condition because it has never caused obvious symptoms.

Each of these constitutes a definite type requiring to be approached by means of special machinery if it is to be brought under treatment. Doubtless good propaganda if persisted in long enough and strenuously enough will result in the establishment some day of routine medical examination for the whole population. Then all of these cases will be discovered,—while the institution of medical examination before marriage—a very necessary procedure, the institution of which only awaits the rousing of public opinion—will mean the prevention of the many infections of women and children which come through marriage. Until such reforms come to pass, however, we must rely on increasing the efficiency of our present methods.

The close questioning of each venereal patient as to the source of his or her infection and as to the persons to whom the infection may have been passed on is essential. The information so obtained should be utilized in an effort to bring all contacts under observation and all infected persons so discovered under treatment. This means a co-operative scheme in which the physician, the social worker and the health department work together. If legislation exists which will assist them so much the better. The careful taking of social histories on each venereal case, the searching out of all sources of infection and contacts would, in itself, mean a rapid multiplication of cases under treatment. If records are preserved and statistics compiled from them we have a tabulation of conditions in the community which should be of infinite value in persuading legislators and the public generally of the necessity for spending public monies, to prevent disease.

At the All-American Conference on Venereal Diseases held in Washington, in December, 1920, the following series of uses for the venereal disease social case sheet were indicated:—

(a) Follow-up work.

(b) Tracing sources of infection.

(c) Tracing contacts.

(d) Estimating the value of educational methods in vogue as part of a local campaign.

(e) Demonstrating economic loss to various industrial and other units in the community.

(f) Demonstrating the social needs of the community, e.g., recreational needs, the necessity for an adequate supply of supervised boarding houses, poor industrial conditions, etc.

(g) Demonstrating distribution of infection.

(h) Demonstrating type of prostitution, extent of solicitation, etc.

(i) Demonstrating medical and social results of venereal disease.

One might easily quote cases which would illustrate each of these uses. The following social case histories chosen at random are of interest.

Case 1.—Illustrates the possibility of tracing a source of infection.

H. M., male, aged 30, suffering from gonorrhoea, separated from his wife, was infected by a fellow employee, Mrs. O. He gives the examining physician her name and address which is recorded on the social history. The name and address are forwarded to the local health department. Three weeks afterwards we are notified by the health department that this women has been located and is now being treated by her private physician.

Case 2.—A similar case.

D. B., male, is suffering from syphilis. He is 25 years of age. His first exposure was at the age of 17 and there have been many exposures since. His training in sex matters, on the part of home, school or church, is nil. He was infected by E. H., age 30, to whom he was introduced and to whom he paid $2.00. He gives her address. This girl was also reported to the health department and came in to the clinic for treatment.

Case 3.

Mrs. J. L. This woman married, aged 37, was not aware of her infection. One of her children was brought to the Hospital for Sick Children suffering from a syphilitic condition. A social history was taken and the case investigated, with the result that two more children in the family were examined and brought in to the Hospital for Sick Children for treatment. In this family three children have syphilis. Three are dead and two are apparently normal. The father and mother, were on investigation, both found to be suffering from syphilis and are now under treatment.

Case 4.

A. W., male, aged 21, suffering from syphilis, reports, Miss M. H., aged 17, a worker in a candy factory, whom he picked up in a park, as the source of his infection. This girl's name and address are given to the health department and in a few days she comes to the clinic for examination. She in her turn reports F. R. as the source of her infection. This man is also traced, found to be suffering from a venereal infection and is also placed under treatment.

The following two cases are illustrative of the amount of damage which may be done by venereal disease:

Case 5.

A young woman, aged twenty-one, came to Toronto General Hospital Clinic suffering from congenital syphilis (syphilis from birth). The following is the history of her family:—

Father died of heart trouble (probably syphilictic).

Mother's marital history was as follows:—

1st pregnancy—Boy, died aged 6½ months.
2nd pregnancy—premature, died.
3rd pregnancy—Miscarriage, 3½ months.
4th pregnancy—Premature, died.
5th pregnancy—Boy, died aged 5½ months.
6th pregnancy—Premature, 8½ months.
7th pregnancy—Born alive, died aged 5½ months.
8th pregnancy—Born alive, now aged 25 years and married. Has had six children, 3 of whom are dead.
9th pregnancy—Boy, died at 18 years—anaemia and congenital syphilis.
10th pregnancy—Alive, has congenital syphilis.
11th pregnancy—Died aged 10 months of measles (?)
12th pregnancy—Born alive, lived one day.

It is the opinion of the clinic staff of Toronto General Hospital that all these deaths were caused by syphilis.

Father's sisters:—One had 18 children of whom five are living;
One had 9 children of whom one lived;
One had 15 children of whom 3 lived.

This family, or what is left of it, is being dealt with.

Case 6.

In the City of Brantford, a man applied to the city for relief. He was found to be suffering from rheumatism and a blood test was done which proved that he had syphilis. This man was placed under the Act and his family investigated with the following result:—

The eldest child was deaf and partially blind.
The second child was dumb.
The third child had a long bone syphilitic infection.
The fourth child was mentally backward.
The fifth child was an idiot.
The sixth child, now 13 months of age, looks normal.

The man and all of the children have syphilis and 4 plus positive Wassermanns. They were all placed under treatment.

The last case is illustrative in a remarkable way of the method by which careful case history work and co-operation between the various agencies concerned may result in gathering infected individuals into the public health net.

Case 7.

In a clinic in the City of Toronto a man acting under the instructions of the Medical Officer of Health reported for examination and was found to have syphilis. He was asked how the Medical Officer of Health knew that he was suffering from syphilis and replied that he did not know and that he was unaware of his condition, himself, until examination in the clinic. This man after careful questioning denied any possibility of having been infected. He later acknowledged that his first wife had died in the asylum of syphilitic insanity.

On being questioned as to illicit contact he acknowledged one contact some months previous to the death of his first wife. This, however, had not been followed by any symptoms. His wife shortly after this had given birth to a child which had peculiar symptoms (probably syphilis) and shortly afterwards she, herself, went to the asylum where six months later she died of general paralysis of the insane. This explained the probable avenue of infection, the man having evidently contracted syphilis and brought it home to his wife, who in turn passed it on to their child.

On calling up the Local and Provincial Health Departments an explanation of the machinery by which this case was brought under control was obtained. The Provincial Health Department make a practice of taking complete social histories of all cases of syphilis discovered in asylums. This man's first wife having a living husband, it was presumed that he had syphilis. A notification to this effect was sent to the Local Health Department, who in turn, notified the husband that he must report for examination. The clinic have in their turn by taking a careful social history and utilizing the services of their social worker brought in the child and also the second wife, to whom it was discovered the man had been married in the meantime.

This case provides a good example of the method by which legislation may be utilized and is also an example of the value of the social worker and social case taking methods.

In this paper no attempt has been made to go into various other matters of importance, information about which may be readily gathered by the careful use of the social case sheet. One cannot but be impressed in many cases by the fact that inadequate opportunity and poor training bear an important role in the spread of venereal disease. The average clinic patient leaves school early—

reason, to seek work. His training in sex matters is in almost every case principally notable for its absence. The social surroundings of the patient have been generally, perhaps I should say, always, conducive to immorality.

Until the presence of such factors is generally recognized and until we make an organized effort to correct the social deficiencies which examination of individual cases makes more than evident, we are not likely to really succeed in controlling venereal diseases. Only by careful social investigation and follow-up can we hope, under present conditions, to begin to control the existing situation and only by such means can we understand the causes which make for the spread of venereal diseases, and hence the action which the community should take to prevent their spread.

The trained social worker is more than an asset in the well organized venereal disease clinic. She is a necessity.

That does not mean, however, that the official social worker should be the only social investigator in the clinic. The physician with his medical training is able to grasp the significance of medical factors more quickly than the social worker and his peculiar ability in this direction should be utilized for social purposes. Too often the physician of the past has been a trained individualist, both as regards himself and his patient—seeing only the case before him and his own interests. The physician of to-day and the future must realize the community significance of his case and not only attempt to cure this case, but take any step which will tend to cut down the total number of such cases in the community. Especially in the venereal disease clinic the physician must be a social worker as well. With his realization of his responsibilities in this direction we may well find ourselves on the fringe of a millenium of health.

The Castine Summer School for Rural Leaders

BY JEAN BROWNE, *Director, Canadian Junior Red Cross.*

CASTINE is a beautiful little town on the east of Penobscot Bay, approximately at the middle of the coast line of Maine. One reaches it by way of steamer from Rockland. This two-hour boat trip reveals a series of small islands, some of them popular summer resorts, and a fascinating coast line.

Castine has its old traditions and its history. The original name was "Pentagöet. It was first settled by French traders under La Tour in 1614. In 1629 it was occupied by the English from the Plymouth Colony under Isaac Allerton. From this date on, it changed hands frequently, belonging at various times to the French, English and Dutch. It takes its name from Baron de Castine, a French general who held possession of it for France between 1680 and 1692. It again came into historical prominence in the War of 1812, when the British took peaceful possession of it and built Fort George, the earthworks of which still remain. The canal at the north, which really makes Castine an island, was constructed by the British in 1814, presumably to prevent desertions from the garrison, and this canal still remains, although it is not used. At the present time, Castine is a quiet dignified little town with long shady streets and large white houses with green shutters. One is told of wonderful old carved staircases within these homes, and of rare mahogany furniture brought from old England. Every home has its old-fashioned garden, and beautifully kept grounds.

The Castine State Normal School was founded in 1872. For the last three years a very interesting summer school experiment has been worked out in it, by means of which a system of "helping teachers" for rural schools has been evolved. The superintendents submit names of their most promising teachers to the State Superintendent, and a group varying in number from fifty to a hundred are selected by him and are sent in to take the six weeks' summer course at Castine. Each teacher thus chosen must have had regular Normal School training. All expenses of the students taking the course are paid by the State Department of Education.

When these teachers return to their rural schools, they teach from Tuesday till Saturday, thus giving neighbouring teachers an opportunity to visit their schools on Saturdays. On Mondays, the "helping teachers" visit other schools in their vicinity, to help the local teachers with their problems. Besides this, they are expected to become real leaders in their respective communities, and their special course of instruction is directed toward this end. When the "helping teacher" completes a successful year's work, a bonus of 25 per cent. of her salary is paid her by the State.

This year an innovation was made by including some twenty school nurses for a two weeks' period. The teachers and nurses took exactly the same work and the combination seemed to be quite mutually helpful. This course was made possible through the courtesy of Dr. Thomas, the State Superintendent of Schools, and the efforts of Miss Charlotte Simon, Red Cross Supervisor of Nursing Services for Maine.

The Unit plan is followed, a half day being devoted to one subject for a week at a time. Courses are given in such subjects as "Country Life Problems," "Newer Movements in Education," "Community Problems and the Community Survey," "Consolidation and Rural School Organization," "Rural School Standards," "Rural School Curriculum," "Medical Pedagogy," "Physical Education," and "Music."

It would be interesting, I think, to describe one day at Castine. The students assemble at 8.25, when the day is formally opened by the singing of the National Anthem, a scripture reading and the Lord's prayer. The following half hour is spent in community singing. On this particular day, Miss Emily Hoag, of the Federal Department of Agriculture, Washington, took the class, in a lecture for forty minutes, taking as her theme, "Is it Worth While to Devote One's Life to a Rural Community?" The class then broke up into four groups, each group having as leader some member of the Faculty. The task allotted by Miss Hoag was for each student to draw a map of a farm and make an economic survey of it, as a model way of developing this later with pupils in the rural schools. The number of acres given over to raising various grains, potatoes, pasture lands, orchard and garden was noted in this survey, and the total yield from each of the fields. For the work of this particular class, it was largely a matter of the imagination; for the child in the rural school, it would be a matter of fact, and very accurate at that. The idea is, then, by collecting the maps of individual farms, to work out a community map and to make a summary of community economic conditions, with the idea of later on making a township map from the community maps. This seems an ideal way of linking up the life of the rural school with the life of the homes and making the young citizens in the rural school intelligent concerning their own community problems.

Work of this sort attaches a dignity and importance to the work of the farm that are too often lacking in the minds of the young people.

In the afternoon, the Director of Junior Red Cross for Canada, opened up the subject of "Medical Pedagogy" in a forty-minute lecture. The class then divided into the same four groups for Round Table Conferences, bringing back their questions and problems to the lecturer for discussion for the last twenty minutes of the hour and a half period. This course was conducted each afternoon for one week.

After a short intermission following the work of Medical Pedagogy, the class took physical education work on the grounds for one hour. The time was almost equally divided between setting up exercises and games.

It is interesting to note that at the outset of this course, the students were each given a physical examination, and the intelligence tests.

Life at the Normal School Residence is rather noteworthy. The residence itself is a beautiful building overlooking the bay. The Matron and members of the Normal School staff extend the most delightful hospitality to the students. There is perfect order, but no outward signs of discipline or restraint, and the happy atmosphere that prevails no doubt has its distinct educational value. Delightful social outings are planned for the week-ends, most popular among these being a day's sail in the bay and a clam bake.

It would certainly be admirable if these community leaders could bring back to their rural schools much of the graciousness that exists not only in the residence, but throughout the whole institution.

To one who looks closely into the Castine experiment, it would appear that at last a really practical and earnest effort is being made to put into effect a great deal we have heard in a vague way during the last ten years or more from one public platform after another regarding the improvement of rural schools.

The Tuberculosis Services of the Massachusetts-Halifax Health Commission

JUNE 30, 1921—JULY 1, 1922.

(At the request of the Canadian Tuberculosis Association, a full report of the Tuberculosis work of the Commission for the past year has recently been made. It is printed here in practically its original form with the hope that it may contain much material of interest to the readers of the PUBLIC HEALTH JOURNAL).

THE Tuberculosis Service of the Massachusetts-Halifax Health Commission is largely predicated on public health education. It consists for the most part of an ambulatory clinic service; a diagnostic service with an expert available to consult with physicians in private practice; a teaching service loaned to Dalhousie University; a medical service loaned to the City Tuberculosis Hospital; a home instruction service, conducted by skilled public health nurses and visiting housekeepers, both under the guidance of medical officers; active co-operation with the Anti-Tuberculosis League; and a routing agency for admission to Sanatoria, Hospitals and Nutrition classes in the public schools.

Six weekly clinics are conducted under the supervision of Dr. T. M. Sieniewicz, Tuberculosis Examiner, who gives his full time to the work of the Commission. Associated with Dr. Sieniewicz is Dr. H. G. Grant. Two clinics are conducted at Health Centre No. 1, Gottingen Street, on Tuesday and Saturday from 3 to 5 p.m., two at the Halifax Dispensary, 31 Brunswick Street, on Monday and Friday from 3 to 5 p.m.; one at Health Centre No. 2, Dartmouth on Wednesday from 3 to 5 p.m., and one at a branch health centre at Tuft's Cove on Saturday from 9.30 to 11.30 a.m. This clinic service, at first furnished to citizens affected by the explosion, has since been extended to any worthy citizen of Halifax city or county.

Besides having general direction of the ambulatory clinics Dr. Sieniewicz serves as a consultant to physicians for the purpose of establishing or ruling out the diagnosis of tuberculosis in any patient, where an invitation to make the examination has been extended by the doctor in attendance. This consulting service is operated on a basis very much like that of Bartlett's in Framingham, Mass., and is bringing good results. By an amicable arrangement with the city, Dr. Sieniewicz has been named as attending tuberculosis expert to the City Tuberculosis Hospital and his services are loaned by the Commission for certain morning hours. This new hospital, with fifty beds, was erected in close proximity to the Medical School, and is proving an invaluable aid to the medical student in his study of tuberculosis. Abundant clinical and much pathological material is made available as would be expected in a hospital largely used for terminal stages of the disease, and for occasional acute cases.

Dr. Sieniewicz delivers a series of ten lectures in the course of Public Health Nursing, conducted under university auspices, and gives another series of sixty lectures to the Third and Fourth Year Medical students of Dalhousie University. He also gives bed-side instruction in the City Tuberculosis Hospital to groups of these students.

Lectures were given by the Tuberculosis Examiner to ninety students in the Normal class at Mount Saint Vincent Academy on "What Teachers Should Know of Signs, Symptoms, Prevalence and Curability of Tuberculosis," and on "What Teachers Should Know of the Prevention of Tuberculosis." The services of the Tuberculosis Examiner as a lecturer are available, free, to any club or society. In June of this year he delivered an address at the Public Health Congress, St. John, on "The Prevention of Tuberculosis as Applied to School Age." In April his services were loaned to the Anti-Tuberculosis Association of that city to assist them in their Case-finding Campaign.

The home teaching service in tuberculous families is carried on as a part of our general public health nursing programme. A public health nurse is present at every tuberculosis clinic. The member of the staff in attendance dictates examination findings which are charted by the nurse. She makes a note of the special advice or treatment that he wishes carried out. All home contacts are given a complete examination for tuberculosis. Home contacts of children of pre-school age are routed through the Commission's pre-school age Dental, Ear, Nose and Throat, and Nutrition services; while school age or older "contacts" are referred to the School Dentist or Dispensary Dental Clinic, and to appropriate clinics for medical and nursing guidance. The Clinic and the Tuberculosis Examiner serve as a routing agency for nearly all patients going to the Provincial Sanatorium at Kentville, and as the routing agency for practically all admissions to the City Tuberculosis Hospital.

The Massachusetts-Halifax Health Commission maintains close co-operation with the Anti-Tuberculosis League. Where field nurses find families necessitous, or nearly so, and where it is not possible for the family to secure the amount of milk required for contact, especially in the cases of young children and babies, the League, very generously, on request of the Chief Nurse of the Commission, contributes the needful amount of milk for such time as is considered desirable.

During the summer of 1921 the League undertook the support of twenty-five children in an open-air camp on the grounds of Health Centre No. 1. Those admitted included those children from seven to ten per cent. or more under-nourished, and, for the most part known to have been exposed to open tuberculosis. This camp was a complete success, and a full account of its operation is contained in the League's Report.

In the Commission's clinic services at Health Centres Nos. 1 and 2, Nutrition classes are maintained, so that all children visibly under-nourished, or under-nourished according to the standard measurements, are especially guided by the nutrition expert and visiting housekeepers in charge of these clinics. In the home, the work of the public health nurse is supplemented by the visiting housekeeper, who visits those homes where nutrition problems are paramount, often giving kitchen demonstrations or going with the housewife to market or store.

The Halifax School Board have facilitated the work of the Commission by making provision for as many of the under-nourished of tuberculosis families attending school, as they can maintain in open-air classes, where they are given the advantage of open-window rooms, and where school lunches are provided.

Beginning with the first of July, 1922, the clinics under the Commission's direction had 322 persons under supervision. During the year, an additional registration of 422 took place. A total of 744 persons were under the supervision of the clinics. During the same interval the Tuberculosis Examiner saw in consultation with physicians in private practice 148 persons, performed 20 operations for thoracentesis, and 19 for pneumothorax. During the year, 34 patients were routed to Kentville Sanatorium, 27 to the City Tuberculosis Hospital in Halifax, and 4 to other institutions. Perhaps the most effective part of the service, however, was that carried on by the instruction visits of the public health nurses. Four thousand two hundred and sixty-one instruction visits were made to the homes of families where tuberculosis existed, or was suspected.

In all of these visits, the nurses gave attention to the various members of the family and to righting those environmental conditions harmful to health. Two hundred and thirty-three separate clinics were conducted, all convenient of access to the necessitous.

By arrangement with the Provincial Laboratory, the Massachusetts-Halifax Health Commission provides a full-time appointee, skilled in pathological and bacteriological work, a trained technician and part-time of a labortory deener. Blood of persons attending the chest clinics for the greater part of the year, were examined with the Wassermann test. Samples of sputum forwarded from the clinics to the Laboratory are studied in the usual way, the report being made to the chief of the clinic. Two hundred and seventy-three sputums were examined under the microscope and 269 bloods were studied for the Wassermann test.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE MONTH OF JULY, 1922.

COMPARATIVE TABLE.

	July, 1922		July, 1921	
Diseases.	Cases.	Deaths.	Cases.	Deaths
Smallpox	40	0	104	1
Scarlet Fever	157	5	101	3
Diphtheria	159	17	285	19
Measles	890	7	223	3
Whooping Cough	79	3	227	7
Typhoid	92	7	44	8
Tuberculosis	144	101	165	121
Infantile Paralysis	3	0	3	0
Cerebro - Spinal Meningitis	6	5	4	4
Influenza	—	4	—	2
Pneumonia	—	85	—	114

VENEREAL DISEASES REPORTED FOR JULY, 1922

	1922.	1921
	Cases.	Cases.
Syphilis	143	159
Gonorrhoea	121	204
Chanceroid	3	4

The reports received of communicable diseases from local boards of health for the month of July show smallpox and diphtheria cases are much fewer than in the corresponding month of 1921, while scarlet fever and typhoid fever show an increase over that of last year, as may be seen in the comparative table.

The increase in typhoid fever cases is largely due to an outbreak in the Town of Hawkesbury, where some 58 cases are reported; Carleton Place also reported 21 cases, but apart from these outbreaks the Province is exceptionally free from the disease, as ony 13 more cases are reported for the whole Province.

The epidemic of measles which some of our cities experienced in the last few months is abating, as only 890 cases were reported against 2,100 for the month of June last.

News Notes

A liberal rate of interest with absolute security is the attractive offer made by the Minister of Finance to holders of the Canadian Government war loan bonds maturing December 1, 1922. The offer is not made to investors generally, but only to the holders of the bonds soon to mature. The bonds to be retired, bearing interest at five and one-half per cent., will be exchanged for new bonds bearing the same rate of interest. See the advertisement of the Minister of Finance.

The article entitled, "The Production of Clean Milk," which appeared in the July number of the PUBLIC HEALTH JOURNAL, was in error credited to Mr. E. H. Stonehouse, President of the National Dairy Council of Canada. This article was written by Mr. Alexander R. White, Chief Sanitary Inspector. The PUBLIC HEALTH JOURNAL regrets this mistake. Mr. Stonehouse's article will appear in an early issue.

The Secretary of the Canadian Tuberculosis Association will visit Manitoba, Saskatchewan, Alberta and British Columbia in October and November.

A new folder, "Finger Posts," "La Bonne Voie," is being distributed in French and English by the Canadian Tuberculosis Association, Bank Street Chambers, Ottawa. A page is devoted to each of the six following subjects: "Good Food," "Clothing," "Exercise," "Sufficient Rest," "Fresh Air," "Sunshine." It is understood that the Canadian Red Cross has furnished funds for the printing of this pamphlet.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society:—

School Health Supervision—

Dr Josephine Baker shows that most physical defects in school children can be found during the eight to ten year period. A thorough physical examination early in school life, followed by the correction of any physical defects, should make unnecessary the yearly repetition of a complete physical examination. The author believes that routine health inspection and annual tests for defective vision offer adequate health supervision after the first complete physical examination. ("American Journal of Public Health," June, 1922, page 465).

Health Work in the Schools

Dr. Thomas D. Wood outlines the aims and methods of effective work for the health of school children. ("The Journal of the National Education Association," May, 1922, page 177).

Diphtheria Prevention Work—

By Abraham Zingher, M.D., Assistant Director, Research Laboratory, Department of Health, New York City. An account of the diphtheria prevention work in the schools of New York City. The Schick test has been applied to a large number of school children and the author reports some interesting observations from the tests in the susceptibility of children of different classes and nationalities. ("Mother and Child," May, 1922, page 207).

City Health Practice—

A report issued by the American Public Health Association on municipal health department administration in eighty-three first-class cities of the United States.

Rural Health Administration—

Report of the Committee on Rural Health Administration of the American Public Health Association. ("American Journal of Public Health," April, 1922, page 316).

Health of Rural School Children—

Suggestions for improving the rural school health programme by enlisting the co-operation of trustees, teachers, parents, school doctors and school nurses. ("The Public Health Nurse," March, 1922, page 145).

The Health Plan for Maine—

The official and voluntary organizations interested in public health in Maine have united to carry out a health plan to place a public health nurse in every community to teach to every school child the practice of health habits and to combat preventable diseases. ("The Nation's Health," May 15th, 1922, page 255).

The Isolation Hospital and Preventive Medicine—

The Medical Officer of Health of Jarrow, England, reviews the present position of the isolation hospital in the control of communicable diseases. ("Public Health,"—S.M.O.H., May, 1922, page 222).

Industrial Colonies for the Consumptive—

In a lecture before the Royal Institute of Public Health, the Medical Director of the Cambridgeshire Tuberculosis Colony describes the general scheme of industrial colonies and village settlements for the consumptive. ("The Journal of State Medicine," May, 1922, page 185).

Health Plays—

A series of health plays for teachers and pupils, by Honora Costigan, Director, Education Division, Minnesota Public Health Association.

The A. B. C. of Nutrition—

By Mary E. Sweeny, Dean of Home Economics, Michigan Agricultural College. ("Public Health," The Michigan Department of Health, May, 1922, page 575).

Malnutrition and the Scales—

A protest against over emphasis of the child's weight in relation to height and age in estimating nutrition. ("Public Health," Michigan Department of Health, May, 1922, page 594).

The Child, the Scales and the Tape Measure—

A discussion of the value of the weight of a child as a practical index of health. ("The Outlook," May 10, 1922, page 67).

League of Red Cross Societies—Popular Health Articles—

"Teaching Health Through Pictures."
"How Mosquitoes Carry Malaria."
"Treatment of the Hair."
"The Poor Man's Cow."
"A Fairy Tale."
"On Washing Up."

Book Reviews

Biology of Sex for Parents and Teachers. By T. W. Galloway. Revised and enlarged edition. Cloth. XI plus 149 pages. Illustrated. D. C. Heath & Co. Boston, New York, Chicago.

"Biology of Sex for Parents and Teachers" is an illuminating book.

The reader realizes this at once. He notes historically the growth of the study of the problems of sex, how this study has developed in the past decade, the ten years that have elapsed since the first edition of this book appeared.

In earlier days, when, as the New York *Life* declared: "It has struck sex o'clock," sex problems received attention from the biological viewpoint. The discussions were anatomical and almost mechanical. They resembled the investigations veternaries carry on at breeding stations. There was much in them of Luther Burbank methods in his achievements in plant perfecting.

To-day, while the biological side receives fully the attention it deserves the sex question has come into social prominence by rising to a far higher plain. Its significance has increased tremendously. It discovers itself to be of vital interest. It is fundamental in all schemes for the betterment of communities physically, morally and spiritually.

Dr. Galloway says: "It is not an accident that love of God and love for mankind and the maturing of the reproductive impulses come together. The period in which the sexual powers mature is the general period of youth in which religion makes its strongest appeal.

"The producing of offspring and fitting them as effective individuals in society is the supreme object of this whole complex of sex and reproduction and of the instincts and behavior associated with them. If this fails, society fails.

"Promiscuous intercourse would destroy any confidence in virtue and even ideals of virtue, leave no place for the home and the emotions that belong to it, make impossible the effective care of children, and destroy completely the conception and sentiments of fatherhood. It would thwart, so far as humans are concerned, all effective mating and care of offspring, and break up the most basic unit of human society—the family.

Sexual self-control is demonstrably in the interst of higher social values. It is fundamental to social advancement. It is essential to all that can make this world a truly joyous place to live in.

For showing this convincingly every one having at heart the well being of the race may indeed be grateful to Dr. Galloway."

"Education in Health," by E. G. Payne, Ph.D. Cloth, $1.00. Pp. 253. Chicago and New York: Lyons and Carnaham, 1921.

The manuscript for this book was prepared by a number of persons intimately identified with an educational experiment in Harris Teachers' College. The instructors in the various departments were in charge of committees. These committees initiated plans, organized the subject matter, and presented conclusions for the consideration of the whole faculty. After full discussion the committees assembled for further discussion and experiment. Therefore, this programme of education in health has stood the test of practical schoolroom experience.

"Graded Outlines in Hygiene," by W. F. Cobb. Cloth, $1.65. Pp. 214. Yonkers-on-Hudson, New York: World Book Co., 1922.

This book is a guide for teachers of hygiene in the kindergarten and junior grades. Definite suggestions show how to interest the child in health, and material is given to be presented at each lesson. This book should be valuable to health teachers.

"Rural Child Welfare," by Edward Clopper. Cloth, $3.00. Pp. 353. New York: The Macmillan Co., 1922.

A study of the relations of the rural child to his home, school and community. This investigation was conducted in West Virginia but the practical results of the study are of general application.

"The Psychology of Nursing," by A. Cleveland Higgins. Cloth $2.75. Pp. 337. New York: G. P. Putnam's, 1921.

This could be made a useful text-book for a class of nurses if interpreted to them by a thorough master of the subject. The content of the book consists of a series of lessons on applied psychology, omitting the fundamentals from which these lessons are derived. It is written in a bright, attractive style and endeavors by means of quotations and references to introduce the reader to some of the great modern teachers of psychology. (E. K. Russell).

Editorial

THE GOVERNMENT'S CONVERSION SCHEME.

THE attention of the holders of the five and a half per cent. war loan bonds maturing December 1, 1922, is directed to the offer of the Minister of Finance to renew the loan on favourable terms. The last Canadian loan was placed in New York at a satisfactory price. The Minister is making his present financial operation entirely a domestic one by offering to exchange the maturing bonds for new bonds bearing the same rate of interest, running for either five years or ten years as the bondholder may prefer. A further inducement to the investor is that he receives a bonus of one month's interest. The terms offered are decidedly favourable to the investor and it is probable that a large part of the maturing loan will be renewed, Arrangements for the exchange of the bonds can be made at any branch of the chartered banks. Holders who do not wish to reinvest will be paid in cash on the 1st December.

KNOWLEDGE AND BELIEF.

KNOWLEDGE and faith and belief and truth are words all of us hold in high esteem. We like to say "I know." We seek to force conviction on a listener by the positive assertion "I know." It is the most emphatic statement that we can make. Often enough it is not a statement of fact, however. It would be more accurate to say "I believe."

We believe many things that we do not know in any exact sense. We cherish these beliefs. We would not part with them. Oft times we cannot. The presence of death itself will not persuade us to give them up. But the fact that we cannot give them up does not prove that they are true. It merely shows that we cannot separate ourselves from them. They may be false—as wrong as possible. Martyrdom is not proof of correctness of view. Every cause has had martyrs and many causes have been altogether wrong and have gone down into just defeat.

Truth is agreement of thought with fact. Facts look different under different colors. They look different from different angles. Some of the facts we hear in the discussions of to-day look extremely different from the French, the English, and the German angles.

What the fact in itself is who can say? It is certain, however, that belief does not make fact, except the fact of believing, which may or may not be important and may be altogether wrong.

We do not say, "I believe" as often as we should instead of "I know." If we believed only what we know we should not believe much. Some of us might not believe anything. A belief is often a choice among several possible opinions. We are apt to think that we have freedom of belief. If we analyze carefully we shall find that we have little freedom in the business of thinking. As a man thinketh in his heart so is he. What is in his heart? Impulses. He inherited these. He had no choice in the matter. He couldn't choose his parents. He could not select the environment in which he is to be born and grow up.

Environment modifies his impulses; represses some and stimulates others. In infancy he knows nothing of this. He responds to the environment quite as a tree does to its environment; if sheltered and nourished it becomes robust; if not it is a failure, possibly a menace. Many minds are out of form and work evil because of the environment in which they developed.

Truth is difficult; knowledge—absolute knowledge—is far from plentiful, but belief abounds and faith gives strength to belief. Without faith the world would be a sad place to live in. There would be no accomplishment in a faithless world. Chaos and misery, that is all.

Faith of itself is a poor master. Could anything be more of a disaster than the Children's Crusade? Read the story over again if you have not seen it recently. It is a story of supreme faith, but intelligent direction was lacking. The fate of the children was something worse than death.

Faith is like coal—useless in the ground; very useful if taken out and managed with intelligent direction, and destructive if its burning is not under control as witness the widespread ruin of farms in Ohio last year when coal deposits miles upon miles in extent burned out and ruined thousands of individual land owners.

It is faith with intelligence behind it that counts. Such faith supplies the urge that impels the Dominion Government to support the Social Hygiene Council, for instance, and the Red Cross, and other organizations for which this journal gladly speaks. It is an incessant urge. Faith supports it and intelligence directs it. Through this faith a blight on our fair land will disappear. The blight is due largely to ignorance. As ignorance gives way to enlightenment the blight will go. Faith spells success.

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The Function of the College in Promoting Mental Hygiene

By C. M. Hincks, *Associate Medical Director and Secretary, Canadian National Committee for Mental Hygiene.*

Paper delivered to Mental Hygiene Section of the National Conference of Social Work, Providence, Rhode Island, June 27th, 1922.

WHEN we consider the present pressing needs in connection with the Mental Hygiene Movement, we are impressed with the fact that the College is an essential factor in fostering progress. And what are some of the needs that loom large to those of us engaged in this field of work? In answer to this query one might venture to suggest at least three obvious requirements: (1) adequately trained workers; (2) an enlightened public opinion, and (3) scientific research. That the College is an indispensable instrument in regard to these needs, is evident, and much comment is no doubt superfluous. There may be some value, however, in discussing certain phases of a University Mental Hygiene programme—way and means of putting it into practice; together with an estimation of the effect upon the College, of the application of mental hygiene principles to its own organization.

Before proceeding further, reference might be made to the history of the Mental Hygiene Movement, and to indicate that the College did not occupy the position of importance in the early phases of the work as it does to-day. It is probably safe to say that the movement had its birth outside of the University. In looking back, we associate early activities with the names of individuals who were seized with the importance of the so-called psychriatic, or psychological point of view, and who, from this angle, studied problems connected with education, delinquency, dependency, pauperism, etc. There were also those who recognized the inadequacy of existing facilities employed by the State in dealing with mentally handicapped individuals. Comparatively little technical knowledge was needed for pioneer efforts in the demonstration of two great facts: (1) that mental abnormality was a prevalent condition, contributing to much distress and wastage, and (2) that numerous reforms and considerable constructive work was required to prevent a continuation of an unsatisfactory state of affairs with regard to the mentally handicapped. While some of the pioneer workers were trained in the fundamentals of psychiatry and psychology, others were not. Perhaps this mattered little, because the great need was to attract public attention to glaring defects in our social organization and indeed the enthusiastic propogandist who had a passing acquaintance with his subject could often succeed in accomplishing his purpose. It seems to me, that we should pay tribute to the men and women of a few years back, who prepared the soil for the developments of to-day, even if their lack of knowledge sometimes led to exaggeration and to the necessity of our undoing some of their work. It is a fact that "feeblemindedness" was greatly overdone, and that the public was given a false conception that still persists in many quarters, but we must be philosophical and remember that more good than harm was accomplished. The point, however, at issue, is that the early work in mental hygiene received neither its inspiration nor its direction from the College. Our Universities did not become an integral factor in the movement until further progress demanded the services of individuals adequately trained in psychiatry, psychology, and political economy.

It has been intimated that the Mental Hygiene Movement needs trained workers and that we look to our Colleges for assistance in this regard. There is a demand for the instruction of medical students who intend to specialize in psychiatry; for those who will follow eventually some other branch of medicine, but who need mental hygiene as an essential in their general training; for the psychiatric social worker and the general social worker; for the public health nurse; for students in theology, political economy, and law; and for those taking a general arts course. A few comments will be made about the educational needs of these various groups.

At present the individual who desires to make psychiatry a specialty can secure the advantages of training facilities that are afforded in certain mental and psychopathic hospitals. It will always be necessary for the student to gain clinical and laboratory experience in this way, but no doubt the College could assist the prospective psychiatrist through post-graduate courses in psychiatry and psychology. I am under the impression that the average medical school on this continent can offer very little in the way of advanced work along this line of study. On the other hand, there are many institutions of learning that provide excellent post-graduate courses in medicine, surgery, pediatrics, and the other specialties.

It seems to me that great good will accrue when the medical college is in a position to furnish advanced work in psychiatry. Aside from the benefit to the individual students, there will be a good effect upon state or provincial mental hospitals. At present in certain parts of the continent, for example, our mental hospitals are really asylums, and little better than boarding-houses. The superintendents of these institutions have for the most part, received their appointments through political influences, and cannot in many instances, be considered as expert psychiatrists. This unfortunate state of affairs will continue, until there are available men who are better trained, and until such a time as it is known in the community, that what was considered satisfactory psychiatric training in the past, was often inadequate and little more than a passing acquaintance with the insane through residence with them in the same institutions. The existence of a first-class department of Psychiatry in a University, would undoubtedly raise the whole scientific level of mental hospital treatment in institutions located in the same state or province, because unsuitable appointees on a hospital staff would be recognized as such and would be replaced by better men.

The College will find an even greater field of usefulness in training the rank and file of medical students in mental hygiene, than in the provision of educational facilities for those who aim to be psychiatrists. We can look for steady progress in social psychiatry, when each succeeding graduating class in medicine from our numerous colleges is grounded in the fundamentals of the subject. One of the great difficulties of the past has been the fact, that medical men have been largely untrained in mental medicine and are today somewhat skeptical concerning the value of the Mental Hygiene Movement. In some quarters, our physicians have not only failed to furnish leadership where it was needed, but have actually blocked progress. Indeed, in some parts of the country, mental hygiene activities are fostered entirely by those outside the ranks of the medical profession. Under these circumstances, we can appreciate the significance of the opinion of a competent observer who stated, that the greatest need of the Mental Hygiene Movement to-day, was the training of medical students in psychiatry.

The nature of a College Mental Hygiene Curriculum for students of medicine, should not occupy us here. The advice might be ventured however, that sufficient training should be granted to enable the student to make a competent psychiatric examination, and to be so informed, that he will be able to interpret, to a degree, his findings. He should also know something concerning therapy. If however, his training carries him only to that point where he appreciates the psychiatric point of view, and does not neglect to study the mental or human factors, of every case, much will be gained. Dr. Macfie Campbell and others have emphasized the important fact that modern scientific medicine has tended more and more, to the investigation of the workings of the individual parts of the human machine, with a neglect of a consideration of the reaction of the patient as a whole. The proper stressing of psychiatry in a university course will go a long way to correct this serious fault.

A certain feature of university organization may be mentioned at this juncture, viz., the relationship that should exist between the departments of psychiatry and psychology. There is no question that medical students, and others requiring instruction in mental hygiene, need tuition in psychology as well as in psychiatry. A difficulty presents itself when the two departments in question are independent and aloof. Under such circumstances, the training in psychology may be foreign to the needs of the student. In Canada, we are advocating the combination or an intimate affiliation at least, of psychiatry and psychology in one department, and have succeeded in the University of Toronto. The results in my home city have justified the move, and we find that more attention is given to clinical psychology than has been the case in the past. Since students of mental hygiene need *clinical* psychology more than instruction along lines that used to occupy the major attention of psychological departments, we are gratified with the new trend of events.

The question is sometimes asked if medical students will take kindly to mental hygiene. Our experience in Toronto may be of interest in this connection. An optional course in psychiatry and psychology was formulated two years ago, and it was hoped that twenty-five students would register. To our amazement eighty signified their desire to attend the lectures and demonstrations, and indeed the class had to be cut down. At the conclusion of the course, there was expressed marked appreciation, and it was considered by the student body to be interesting and well worth while.

During recent years, many Colleges have made provision for the instruction of social workers and public health nurses, in mental hygiene. In the University of Toronto, and McGill University, Montreal, Social Service Depts. undertake this important work. The courses extend from one to two years and have won a place of pre-eminence in the curriculum. Already we are reaping in the Dominion, the reward of these activities. Social service generally, has been elevated to a higher plane, and no home investigation is considered satisfactory without psychiatric notes. Since, however, mental hygiene progress has been slower in the medical schools of the country, we are facing a peculiar situation in Canada. Our social workers are often better trained in Mental Hygiene than is the case with our medical profession. Perhaps this will influence the latter to hurry their steps, so that they will keep pace with the demands of the time. At any rate we are optimistic in this regard.

Experience is teaching us that short courses in Mental Hygiene for social workers are inadequate. It takes two to three years for a student to find a firm foot-hold in the subject—one of the most difficult in the university calendar. Text-books and lectures can only be looked upon as an introduction to case-work—the latter provides the real training.

Probably no branch of medicine is so dependent upon expert social service, as psychiatry. Diagnosis and treatment often require the assistance of the field-worker, but an individual who is partially trained is often of little value—sometimes indeed she is a menace. We cannot, therefore, emphasize too strongly the need for thorough instruction in this field of university work.

As yet we have not made a beginning in Canada, in the Mental Hygiene instruction of students in theology, law, and political economy. It is felt in many quarters, however, that our universities should undertake this important work. Our clergymen, lawyers and politicians, should be keen students of human nature, and would benefit greatly if they were trained in the fundamentals of psychiatry and psychology. A mere reference to needed Mental Hygiene developments in church organization and courts of law, will show the necessity of educating aright, those who are called upon to administer these activities.

In every church community there are to be found a considerable number of individuals who belong to the mentally handicapped group. When misunderstood they may fail to benefit by the religious exercises, and sometimes act as disturbing elements in the church organization. Efficiency demands their recognition and special attention where this is possible. The Sunday-school, for example, can ill afford to group defectives and normals indiscriminately, in the same classes, and experiments might well be conducted, akin to the special class organization in public schools. Any further discussion of the subject is not warranted in the present paper, but the writer is confident that the Church presents a fruitful field for Mental Hygiene, and that one of the best methods of attack will be through the training of theological students.

Much has been written concerning the application of Mental Hygiene principles in connection with our treatment of delinquents. Although many courts are utilizing the services of Psychiatric Clinics, and some progress is being made in the classification, according to mentality, of the inmates of penal institutions, nevertheless, much remains to be done in this field. The legal attitude toward mental abnormality is far removed from the medical standpoint. Legal attention is directed primarily to statutes and not to individual delinquents. However, when law students have the advantage of studying criminals as well as the criminal code, advance will surely come. We shall welcome the day when a self-respecting psychiatrist can submit honest evidence on the witness stand, that will not be so twisted and turned by opposing counsel, to make it appear that the alienist himself is either a knave or a tool of the highest bidder.

An entire paper could be devoted to the Mental Hygiene programme that the College should provide for other groups of students. Those who are enrolled in pedagogy and in the general arts course, need special attention. A study of human nature should indeed form the very ground-work for all culture. Women students in particular, require Mental Hygiene for self-application, and for the utilization at such a time when they may be rearing children. And so one might continue in showing the wide range of usefulness of the University in this regard.

Another phase of College work is that of moulding public opinion favorable to Mental Hygiene progress. The very fact that the University has placed its stamp of approval upon the Movement, carries great weight with the lay mind. The public would, no doubt, consider our activities in the nature of a fad or a frill, if we did not possess the sound backing of our institutions of learning. Indeed without this support, we would be in much the same position as phrenology, spiritualism, and the like. Our College attachment, however, makes it evident that ours is not a pseudo-science, but that we are proceeding along rational lines that will stand the acid test of critical examination.

In the Dominion, we have realized the importance of the College in this connection. Our Canadian National Committee for Mental Hygiene, chose as its initial members the Presidents of our Colleges, and much propoganda has emanated from the Universities themselves. Most of our public meetings are held in college buildings, and we feel that we have benefitted greatly by this procedure. The Universities have appreciated the opportunity of fostering a great humanitarian work, and have found an outlet for community service, that they did not previously possess.

The role of the College in fostering Mental Hygiene Research is deserving of emphasis. Psychiatry is the most backward of all branches of medical science, and there is need for a vigorous programme of study that will add to our existing store-house of knowledge. The University should be in the fore-front in this enterprise. Valuable research has been conducted in Canada under College auspices, and our Canadian National Committee for Mental Hygiene, is urging the continuation of such a policy, and indeed has in some instances provided funds for the purpose.

It is doubtful if the University can escape research. Strong Departments of Psychiatry and Psychology are weak organizations if they are not continually facing the solution of new problems. Since this is the case, those of us interested in the Mental Hygiene Movement, need not urge greatly the necessity for research, but we can with advantage, keep a weather eye on the problems studied. Much investigation is of little value, because the problems attacked are of minor importance. Let us, therefore, present significant tasks for the attention of our trained university investigators. This will not always be easy. One study conducted under the auspices of our Canadian National Committee, required the space of six months for the formulation of the problem that was to be attacked.

It is interesting to conjecture concerning the effect upon the College if Mental Hygiene principles were to be applied to its own organization. In the opinion of the writer, the very complexion of our institutions of learning, might be changed, if even a limited programme were put into practice.

Our Universities, for example, proceed for the most part, upon the supposition that the mental training of paramount importance, is the development of intellect. Our standards of college-entrance are intellectual standards. Examinations must be passed that place a premium upon range of information, and proficiency in academic subjects. The College curriculum is a category of intellectual pursuits, and the student graduating with highest honors may be merely an intellectual machine.

Mental Hygiene studies are proving conclusively, however, that the mental factors leading to success or failure in life, are preponderatingly emotional and dynamic factors, together with those elements that have to do with control and balance. When we study men of eminence, for example, we are often impressed not so much with itellectual acumen and agility, but with energy, enthusiasm, sustained activity, courage, and the like. When, too, we investigate social failures, we find in many instances, individuals, not particularly lacking in intellect, but deficient in those subtler qualities that seem to be the springs of conduct.

When once the College realizes this important fact, will there not be some shifting of emphasis in the training submitted? Surely something will be done to enhance the usefulness of students who are naturally endowed with mental characteristics that are of great value in the work-a-day world. Too often, it is true, that the College ignores these finer qualities, and may indeed inhibit them to the great future disadvantage of the individual. I have heard it said for example, that a certain man well-known in European politics would have been ruined by Oxford, and probably such might have been the case.

Certainly the whole question is deserving of the attention of University authorities. The College gains no prestige when it puts its stamp of approval upon an intellectual gymnast, who proves to be a failure outside of college walls. A friend of my acquaintance received a Rhodes Scholarship, but aside from intellectual endowment of a certain narrow character, he was otherwise hopeless. A realization of a few fundamental principles of Mental Hygiene, would put an end to such a ridiculous procedure.

These remarks should be tempered with the statement that it will always be necessary for a college to pay due attention to intellectual development, and it should also be said that the mental life is of such a complex nature, that there can be no disscetion into water-tight compartments of intellect, emotion, volition, etc.

It may be said that the University recognizes the importance of the all-round mental development of its students. Is there not provided the athletic field, the common-room, the College theatre, the fraternity, etc.? Are these not influences for the development of character and all round manhood and womanhood? The answer is undoubtedly in the affirmative, but after all the methods employed are chance methods, and compared with the attention devoted to inellectual training, can be considered haphazard.

What then needs to be done? The writer is in no position to venture suggestions. It seems, however, that a sound beginning would consist in providing facilities for the psychological and psychiatric examination of each student, and then the College would be in a position to estimate the needs of the student body as a whole. Individual investigations and advice based upon these studies would be invaluable to each student. The latter would be placed in the position of "knowing himself", knowing his strength and his weaknesses. There would result the prevention of many a mental break down, and the guidance aright to the most suitable vocation.

That psychiatric examination and advice are sometimes unduly postponed when not undertaken during undergraduate days, is known to many of us. In a certain university centre striking examples of this fact have been seen in the last few months. College graduates have presented themselves for assistance,—assistance that was needed earlier—much earlier in life. One was the case of an eminent Professor who had married a girl suffering from mental disease, and whose life was rendered almost unbearable by the unsuitable union. Another graduate known from one end of the country to the other, and married into a family in which mental disease and mental defect were prominent factors, and his wife herself was distinctly abnormal. His medical training had never included sufficient psychiatry to be of value. A slight knowledge of Mental Hygiene might have prevented these men from marriages that were bound to lead to disaster. Another case was that of a professor who had a psycho-neurosis since graduate days. Earlier treatment would have been a great boon. Three graduates sought advice because of suicidal tendencies, and one came because of a mania to set fire to buildings. Indeed, clinical records are not lacking in proof of the need of a Mental Hygiene Bureau in a college.

The individual study of 5,000 students attending a single university seems to present an impossible task. Such is not the case, however, if the proposition is considered worth while. Psychiatric work during the war demonstrated the fact that no job was too large, if it were of prime necessity.

Unfortunately group tests are of little use in the college. Professor J. W. Bridges, at Toronto University, finds the results of extensive group tests that he has conducted, to be practically without value. Indeed the writer is convinced that a short cut will never be found to the evaluation of the all-round mental capacity of college students.

As has been said a Mental Hygiene programme for a university might begin with the examination of the student body, and as has been suggested in some quarters, a study of the teaching staff as well. With this as a beginning there would undoubtedly follow changes in College organization, that would better meet the needs of individual students.

The university that has the courage to apply Mental Hygiene principles to itself will through example exert a great influence for general Mental Hygiene progress in other sections of the community.

In conclusion might I again emphasize the important contributions that the College can make in Mental Hygiene,—(1) the training of the students, (2) the moulding of public opinion, (3) research, and (4) self application of Mental Hygiene principles.

Interpretation of the Wassermann Test

BY H. K. DETWEILER, M.D., *Clinician in Medicine, University of Toronto.*

ALTHOUGH many observers, both clinical and laboratory, whose ability and professional standing are of the highest, find in exhaustive critical studies that the Wassermann test is remarkably reliable and coincides in a wonderful way with both clinical and post-mortem findings, there are others who consider that the results are disappointing and claim that in the conditions in which the clinician needs its help most, it is least accurate.

The practitioner who realizes the limitations of clinical examination in the diagnosis of syphilis, and is ready to welcome any test which will give him a clearer insight into his patient's condition, must be disturbed when he reads in the literature the varying opinions on the reliability of the Wassermann test. On the one hand, he knows that reputable syphilologists the world over acknowledge their indebtedness to this test; on the other, he finds workers who assert that it tells us we have syphilis when we haven't and that we haven't when we have. Few of the articles in question provide the data which would enable the practitioner to form his own judgment, and the informed reader must often register a wish that some such rules as the following were observed by writers on the subject:

1. The clinical evidence shall rest on examination by a thoroughly trained observer, backed if possible by an independent opinion of equal standing. It shall be revised whenever a positive Wassermann reaction disagrees with the clinical findings. The reason for this will be apparent to any one who has experienced the difficulty of excluding syphilis. How often subsequent events, other than the Wassermann test, prove a case to be syphilitic when syphilis was first excluded!

2. The serologist shall be one whose skill and experience is such as to render him as free as possible from the chance of technical errors or errors in interpretation.

Read at the joint meeting of the Canadian Public Health Association and Canadian National Council for Combating Venereal Diseases, St. John, N.B., June 6, 1922.

3. Every test which disagrees with the clinical findings shall have been repeated.

Fortunately, the number of articles in the literature in which the test is adversely criticized, is becoming fewer as time goes on, but even at the present moment all are not in agreement over this question. It is only by continued critical surveys of large and small series of cases, that the true status of the Wassermann test in the diagnosis of syphilis will ever be established. Many of us are already satisfied with the evidence brought forward in the past ten years, and I wish to present in this brief communication a summary of my own views upon the subject, reserving for a future report a detailed consideration of the data upon which such views are based.

1. Does a positive Wassermann test always indicate the presence of syphilis?

To answer this we must first define what we mean by a positive test. My remarks refer to the results of the test as performed in our laboratory, using the well-known technique which we have published on different occasions. Complete fixation with 0.05 c.c. of serum, or 0.25 c.c. spinal fluid is recorded as very strongly positive. Complete fixation only as low as 0.1. c.c. of serum of 0.5 c.c. spinal fluid is recorded as strongly positive, while complete fixation with 0.2 c.c. serum or 1 c.c. spinal fluid is regarded as positive.

We find by long experience that almost all cases of untreated syphilis, excepting certain early primary cases, show complete fixation as low as 0.05 c.c. serum. This finding has led us to believe that such a result, if persistent, is not only almost pathognomonic of syphilis, but under the conditions outlined below, one may go so far as to say that it means live spirochetes in the body. In this we are in accord with the views of many of the world's most thorough and painstaking investigators, including McIntosh and Fildes, Fordyce, Walker and Swift, the British Medical Research Committee and many others. Even in the absence of clinical signs of syphilis, a persistent very strongly positive test as I have described it, is such strong evidence of the presence of the disease that were I the subject of the tests, I should insist upon treatment.

The only other disease seen in this country that will yield such a result is, I believe, leprosy. The statement that leprosy may give a persistent positive result, I base not on personal experience, but on the reports of serologists such as I have named above, and others.

I stated above that we have found by experience that *almost* all cases of untreated syphilis, excepting early primary cases, yield a very strongly positive result. Why *almost?* What exceptions are there to this rule?

I think the most numerous exceptions are certain late cases with central nervous system involvement. Some of these may have negative blood and positive spinal fluid. Many of us have seen cases of undoubted tabes, however, with negative Wassermann in both blood and spinal fluid. A certain number of these are due to previous treatment, the history of which the patient may or may not be able to give. But there is evidence to show that even untreated cases may occasionally be met with, with completely negative serological findings. Here the thoroughness of the clinical examination means everything in the diagnosis.

So-called latent syphilitics are believed to yield a percentage of negative Wassermann tests, variously estimated at from 54% (Muller) to 33% (Craig). Fildes claims that such figures include many treated cases.

You will notice that I have used the expression "persistent positive Wassermann test" repeatedly in the discussion *re* the importance of a positive test. The word persistent is used advisedly. I believe no one is justified in regarding a case without symptoms or signs, as luetic just because he has a positive Wassermann unless this has been repeated and found to be consistently positive. I make this statement for two reasons: First, because no human being is infallible, and while a laboratory may reduce the chances of errors in technique or of mixing specimens to a minimum, still, that minimum *does exist;* secondly, because we have learned by long experience that certain diseases tend to produce changes in the blood serum which may result in its acquiring the power to fix complement in varying degree. When this change reaches a maximum, the result may simulate very closely a positive Wassermann test. Thus we have come to recognize pneumonia in its acute stages as being particularly prone to react in this way and such a test is always repeated after convalencence has set in. To a less extent we have come to look upon other conditions in the same way, viz., pregnancy, anaesthesia, nephritis, biliary tract disease, and possibly diabetes. Usually the amount of fixation is slight and does not occasion any difficulty in interpretation, but now and then it is marked and such cases are always repeated again and again. For some reason unknown at present, such fixation has been found to be inconstant and so far as we know, repeated Wassermann tests are successful in detecting the false result.

When we first began to study these peculiar reactions, the technique being employed was critically examined, because an error in manipulation seemed to be the most plausible explanation. However, the literature presently began to record similar experiences in other laboratories, and it has come to be a recognized fact that these peculiarities do exist. Precautions such as we have outlined above, however, render it extremely unlikely that any serious error should occur.

It is worthy of note in passing, that the Wassermann reaction in the spinal fluid is even less subject to non-specific results than the blood serum. In our experience, instances are rare indeed in which fixation was found in the spinal fluid of a non-syphilitic.

It is impossible in the time at my disposal even to touch upon all the phases of the question before us, but I wish merely to mention the importance of the Wassermann reaction in controlling the treatment of syphilis. It is interesting, and above all very profitable to observe the gradual change from positive to negative under efficient treatment.

Now and then, one has the experience of receiving from the laboratory a report reading "very strongly positive" time and time again, although vigorous intensive treatment is being carried out. Such an experience is probably confined to long-standing cases and many physicians become extremely pessimistic in regard to the outlook. Some observers have applied the term "Wassermann fast" to such cases.

Some years ago we undertook to determine what was actually happening in the blood in those seemingly refractory patients. In a titration of the blood before and after treatment it was found that in the great majority there was an appreciable diminution in the strength of the test, although the ordinary test still read "very strongly positive." It is thus seen that the treatment really has had an influence upon the serological reaction although it is not as marked as one would wish.

In concluding this short paper, I wish to make it clear that the preponderance of present evidence goes to show that the Wassermann reaction in competent hands is extraordinarily reliable and consistent with clinical findings. *It is in the clinics where the most accurate records are kept, that it finds its greatest confirmation.* In a painstaking investigation of the co-relation of laboratory and clinical findings for the past five years, in the Special Treatment Clinic of the Out Patient Department of the Toronto General Hospital, just completed in our laboratory, unexplainable discrepancies in the test have been narrowed down to the almost incredible number of two. Granting that we have probably missed some of the discrepancies, such a low number of errors, even multiplied tenfold, constitutes a mighty testimonial to the efficiency and reliability of this famous laboratory procedure.

Nostrum and Quack Evil

By Dr. P. S. Campbell, M.O.H., *Port Hood, N.S.*

IT occurred to me that this matter touched public health sufficiently closely to warrant a brief review of the Nostrum, the Nostrum Vendor, his methods and in certain cases, an analysis of what he has to offer. I do not claim any special knowledge in this field and cannot hope to offer much that is new; what I have to say is, probably, well known to all of you—nevertheless it may be well to keep the subject fresh in your minds with the hope that more activity will, in future, be directed to clearing our province of this nuisance which has, of late, assumed rather alarming proportions. That it touches the public health is or should be well known to every physician,—such being the case I offer no apology for looking into the matter with you.

My direct stimuli or inspirations for devoting some time to this phase of the health problem are three:—

First.—I have seen several fraud medicinal preparations used from time to time as well as the results following on their use.

Second.—Some of our newspapers, otherwise respectable, persist in handling those quack advertisements, the number apparently increasing as the months pass by.

Third.—Canada is becoming more and more the "happy hunting ground" for the fraud mail order concern, the fraud medical institute, and the fraud drugless healer.

Many people, who can ill afford it, are spending the little they possess on worthless and harmful nostrums—worse than that the health of many is being ruined—Still worse, I am of the opinion that lives are being sacrificed due to the poisonous mixtures recommended so freely by their manufacturers, and advertised so conspicuosuly in our newspapers.

Every practising physician has experienced that type of nervous individual who guzzles nostrum after nostrum in the hope of curing some fancied ill—such an one starts out organically sound, yet comes to an early death. Kidneys or other organs ruined by the irritant or poisonous preparations he has swallowed. This man

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Read at the Annual Meeting, Association of Medical Health Officers of Nova Scotia, Sydney, July 4th, 1922.

leaves us at a time when he should be of most value to his community. All of this we see going on about us in a very general way and for want of properly directed energy, or courage, or the expenditure of a few dollars, or what not, fail to strike out and deal the charlatan the death blow he deserves.

Our prisons are filled up with better citizens than those malefactors who play on the credulity of the people by extorting large sums of money from them for useless, fraudulant and definitely harmful preparations. All nostrums may be divided into two groups, equally fraudulant; viz., harmless drugs and injurious drugs. In preparing them full use is made of the purgations, coal tar products—the narcotics and alcohol—A nice group indeed to place in the hands of the public with directions to use freely and continuously. The purgatives may be good in their place, but if used indiscriminately may produce a good deal of harm. Narcotics will, of course, stop pain, but no one but a knave or scoundrel considers them safe remedies in the hands of the masses.

Acetanilid, which was the base of many, notably the headache powders, will sometimes relieve headaches—but if taken as the advertising matter directs—may affect the heart permanently as well. Many deaths have been caused by its continuous use.

Alcohol sold without restriction does not tend to promote good health or citizenship, but on the contrary intoxication with its attending ills. All of these are habit-forming and as a result most detrimental to the public health.

The quack campaign is almost always launched through the press—the business being a profitable one, the promoter can well afford to purchase much of the advertising space and at the highest possible rate. Many of the ads. are designed to entice the person who suffers from an incurable disease; here is found the ideal victim; the chronic progressive disease stimulates the sufferer to experiment with cure after cure, (the promise of relief being "half revealed and half concealed" in the press advertisement), thus the poor unfortunate buys the fraudulent nostrum thereby forfeiting his only chance of recovery, by neglecting those things which tend to help him until he arrives at a stage when nothing will avail. Look carefully through the fake advertisements of the average daily paper and you must conclude that the covetousness of the publisher and the gullibility of the public are limitless. The only argument for justification the newspaper owner can offer is, that the advertisers and not himself, are responsible for what appears in the advertising columns.

Next to the advertisement comes the testimonial as a seller for the patent medicine. These testimonials are ingeniously arranged and carefully distributed to the prospective customers. So nicely are they worded that the public is deceived into believing they are of great value and represent the honest opinion of intelligent people who have been cured and out of sheer gratitude send the glad tidings to the medicine man, in order that other sufferers, less fortunate than they, may also be brought back from the grave. The truth about testimonials is: Almost all of them are solicited. A few may be genuine on the part of the giver, but these are worth nothing inasmuch as they represent the opinions of persons of low itelligence and who have been cured by nature's methods and not by any remedy contained in the fake medicine. Others eminate from a certain class of conceited individuals, with poorly developed gray matter, who desire to see their names in print with possibly a photograph alongside. Others again are secured in exchange for a few bottles of the medicine. A great many of them are bought, clever solicitors being sent out to extract them from the unthinking—One thus secured from a man of prominence being worth much more than one from the man of the street.

Lastly, there are the testimonials from so-called eminent physicians to which the quack so loves to give a prominent place. Of these it may be said some are faked, some twisted out of shape and the balance come from physicians of no standing in the profession. In general it may be said that all testimonials are paid for in one way or another.

Before passing on, and in order that there shall be no misunderstanding, it might be well to define the term quack. Look up any small dictionary and you will find some such definition—"Boastful pretension to skill which one does not possess, especially in medicine." This is not complete enough, the following is a more markable definition: Any person who advertises a cure or treatment for any disease, who issues testimonials, who identifies himself with a secret or mysterious preparation, or who diagnosis or treats, (by mail) those whom he has never seen, is a quack. Any person who puts forward boasts, or advertises a special method, system or cult is a quack: any paper, medical or otherwise, which endorses secret, mysterious or fake remedies or cures is a quack publication; Any institution that advertises by publishing testimonials or approvals of any kind (excepting possibly in a medical journal) is a quack institution. In dealing with this quackery business, it is possible to make at least a partial classification: for example, there are—

Tuberculoses cures
Cancer cures.
Female disease cures.
Male disease cures.
Epilepsy cures.
Deafness cures.
Kidney disease cures.
Drug cures and drugless cures.

and a long list of miscellaneous cures, both drug and mechanical.

I shall now deal, in detail, with a few preparations confining myself to those most advertised locally at present. The first then to suggest itself is "*Tanlac*". This is a nostrum with which you are all thoroughly well acquainted, thanks to several of our progressive newspapers and to many of our druggists—especially Kinley's, Limited, Halifax. This preparation manufactured by the Cooper Medicine Co., Dayton, Ohio, was originally called "Cooper's New Discovery." Perhaps when the term "Tanlac" shall have worn out, it may appear under another name and continue to gladen the hearts of the people, while incidentally relieving them of their surplus cash. The exploiters of this mixture claim that with other things it contains a plant discovered by Cooper's uncle, "a Scientist," and that the services of a "German chemist" are made use of in preparing the ingredients. It is sold as a tonic and system purifier. The usual air of mystery surrounds the discovery. It depends for its sale chiefly upon the ignorant and weak-minded. the bait being testimonials. Of these testimonials some are faked, some paid for and almost all come from people who know little or nothing about disease or recovery. The chemists of the "Michigan Food Department" analysed "Tanlac" and found it to contain—

Alcohol 16.4 per cent.
Glycerine 2 per cent.
Licorice present.
Aloes or Cascara—present.
Gentian—present.
Alkaloids (Berbarin) a trace.
Tartaric acid—trace.

It is thus essentially a wine to which has been added some bitters and laxatives. The presence of a fair percentage of alcohol makes it easy to understand why it should be so popular in a prohibition country.

It might interest the newspaper owners and drug store proprietors of this province, who are pushing the sale of "Tanlac" to know, that, the discoverer of this wonderful panacea, viz., L. T. Cooper, is a convicted fraud, he having pleaded guilty to an indictment in Kentucky some years ago. I suppose it is hopeless to expect druggists and newspaper proprietors who are sharing good profits, to be affected by being brought "face to face" with facts regarding "Tanlac" or any other universal cure all.

Lydia E. Pinkham's Vegetable Compound.—The Halifax *Herald* of March 20, 1922, contained a testimonial said to be written by Mrs. F. P. Hansen, of Wisconsin, advising all women with female troubles to use this compound. A note at the bottom of the Ad. says, "If you are suffering from troubles that sometimes follow child birth, bear in mind that Lydia E. Pinkham's Compound is especially adapted to correct such troubles." Here again is a preparation which depended upon alcohol for its popularity, analysis by the British Medical Association was as follows:—alcohol 19.3% by volume, 0.67 solid substance, ash 0.06% traces of tannin and ammonia and a small quantity of reducing sugar—no alkaloids. Here then is another valueless preparation kept on the market for about fifty years by means of lying advertisements and worthless testimonials.

Cancer Cures.—Most of the so-called cancer cures are of two kinds—first, those which consist of an external wash with drugs for internal administration, and second, plasters or pastes containing caustics or escharotics to be applied to the cancerous surface. It is safe to say that all belonging to the first class are either absolutely valueless or definitely harmful. Even if they are not in themselves harmful, the patient is led to rely on them until the cancer reaches a stage where no treatment will succeed. The pastes, have, I believe, been used by some reputable physicians, in selected cases of cancer, but even in such cases the treatment is anything but certain. When persons are treated by those pastes through the mails or in the hands of one who has had no medical training—the cure becomes at once alarmingly dangerous.

In the Halifax *Chronicle* of March 27, 1922, I noticed the following advertisement: "Goitre, Cancer—Tumor—"Purifico" "Send for book of Sworn Statements." Signed C. W. Diffin, Bridgeburg, Ontario. I did send and promptly received a book of testimonials and a letter signed by Diffin—advising me to begin the Purifico treatment at once. Here is a sample testimonial many of which approach the ridiculous: "The doctor gave me but two weeks to live. This was four years ago. I had been in hospital six weeks and the doctors there decided I had cancer of the stomach and sent me home to die. A neighbor brought me some Purifico—I started to take it and inside of a week I was able to eat some and felt better in every way. To-day I am a well woman, able to do my work on the farm, and the lump in the stomach is all gone." Signed Mrs. C. P. Jensen, Pierson, Manitoba, December, 1921.

Accarding to Diffin's literature—',To Dr. Eleanor E. Burnside, of Buffalo, N.Y., belongs the honor of perfecting the Purifico remedies, to which she gave years of study. The doctor is a graduate of the New England Female Medical College, class of 1867, and an honor student. There are three numbers to Purifico, one, two and three, to be taken internally and, of course, the antiseptic wash. Single bottles cost $5.15—six for $25.15. I am indebted to the American Medical Association for the analysis of this life-giving Purifico. It is as follows:—"No. one, 10% alcohol, with sugar, small amounts of glycerine, potassium Iodide, cinchona alkaloids, piperin and emodin (probably senna). No. two, 9% alcohol, sugar, small amounts glycerine, potassium Iodide, cinchona alkaloids and piperin. No. three, 14% alcohol, sugar, valerian, piperin and tannic acid. All these products falsely and fraudently advertised." I leave you to judge of the value of those preparations as Cancer Cures.

In the county of Inverness we are "fortunate" in having a cancer paste vendor, in the person of a man who has had no medical training whatever. The formula of his paste is, of course, a profound secret and it would be unholy and impudent on the part of anyone to endeavor to find out the constituents. It was my privilege to meet this man not so very long ago; the occasion being a call I received to come, at once, to a certain home. Arriving there I found the cancer man had been at work—and had scarcely entered the room when patient and quack told me, in unison, that "the cancer treatment was quite successful, but unfortunately erysipelas developed which disease they would be glad to have me treat." I thought a lot, said little and succeeded fairly well, in controlling my feelings. Examining the patient I found the doctor, so called, had been applying his plaster to an area of the face which, according to his diagnosis, was cancerous. I further discovered a spreading infection extending from the neck to the top of the head, no doubt due to some one or more of the pyogenic organisms and most likely introduced by this operator, whose knowledge of asepsis and antisepsis must have been as profound as his knowledge of cancer or tumors in general. I was not able to confirm either the diagnosis of cancer or of erysipelas. Having done what I considered proper for the patient and while saying a word preliminary to leaving the house, the patient said, "perhaps you have never met this cancer doctor before"; to my reply in the negative he gave a formal introduction—remarking that "being both doctors, in the same business and doing the same work we should know each other better." You can imagine my feelings now. Insult added to injury—to be accused of being in the same business as this itinerant cancer paste vendor was too much! It was as "the last straw to break the "camel's back." Needless to say "I stood not upon the order of my going, but said at once good night."

How serious this matter is none but the trained physican can appreciate. It would be humorous and ridiculous if human lives were not at stake. That mail order concerns and travelling quacks, who have nothing but cleverly worded or lying advertisements, testimonials fake and otherwise and colossal ignorance to offer can deceive so large a percentage of the people, illustrates well the astounding gullibility of the public.

Consumption Cures.—Some two years ago I was called far into a rural district to see a young girl of 19 or 20 years, whom I found to be dying of pulmonary tuberculosis. She was then finishing up the third refill of a damnable nostrum at twelve dollars a refill—believing, as the quack literature stated, that a few more bottles would cure her. Her people were extremely poor, nevertheless they managed to rake up the twelve dollars whenever, according to the "follow up" literature, the requirements demanded it.

Of all branches of fakery the consumption cure branch is one of the most profitable and at the same time the most despicable. In consumption the mental factor probably plays a more important part than in any other organic disease. Here hope is relied upon to a most exaggerated degree. Every physician who has treated consumptives knows this. A little change in treatment or change in physicians may be all that is necessary to bring about a temporary improvement. The quack makes complete use of this mental instability to extort large sums of money for either a worthless or a definitely harmful nostrum. This is tainted money—worse than that it is blood money! So vile is this trading that it appears to me the devil will never have all his specially chosen people about him until he gathers in those who have been, who are now and who will be engaged in the manufacture and exploiting of quack consumptive remedies.

Now I shall pass on to the consideration of a mechanical cure—a good type being the J. B. L. Cascade.

A few months ago a man came to consult me for symptoms which were referable to an enlarged prostate. He told me he had taken an internal bath and seemed amazed that he was not better as a result of it. To my questioning about the internal bath he again seemed amazed, but this time at my ignorance. About the same time I saw an advertisement in the Halifax *Morning Chronicle* which was headed "No more sleepless nights—finds health in internal bathing." Then followed testimony from a user of the Cascade saying he had been cured of indigestion—nervous debility, insomnia and allied troubles by this advice. Then the pregnant message that the Cascade was being shown and explained at W. H. Stevens', Dartmouth, and Kinley's Ltd. Drug Store, Halifax. "Write to them for free booklet or to Tyrrells' Hygienic Institute, Toronto." I wrote the Institute and received a reply from the Canadian Manager, testimonials, diagnosis chart form and literature on the internal bath. The letter said in part "to send for the treatment in order to bring health, comfort, contentment. Remember, besides the treatment, which is dispensed in strict accordance with professional ethics, you may consult Dr. L. E. Pineo (well known as a New York Specialist), either by mail or in person." The treatment consists in the administration of rectal enemas of a so-called antiseptic tonic placed in the Cascade. The Cascade itself is not unlike an ordinary rubber hot water bottle with a rectal tube protruding from one of the flat sides. The modus operandi is as follows:—Fill up the Cascade with the tonic, insert the tube in anus, sit on the rubber bag and the weight of the body forces the liquid into the rectum. This piece of apparatus is said to have been invented by one Charles A. Tyrrell, an "eminent" physician of New York. Said Tyrrell also brought forth a new theory of disease and its causes, it is this:—"There is only one disease, but with many manifestations; there is only one cause for disease and that is auto-intoxication." This theory was probably originated to help sell the Cascade. It makes one think that "ignorant physician" would have been a better term to apply to Tyrrell than "eminent physician." The Cascade was in reality invented by H. M. Guild and patented in 1903. Later on the patent was assigned to Tyrrell, yet Tyrrell himself claimed to be the inventor.

The Journal of the American Medical Association in 1917 gave a "write-up" of Tyrrell in part as follows:—

"He received a diploma from the Eclectic Medical College, New York, in 1900 when he was 57 years old. He was president of the concern that sold the "Ideal Sight Restorer" (a notorious fraud) as a cure for most eye-ills. Tyrrell also appeared in the role of publisher and "editor-in-chief" of a quasi-medical magazine, *Health*. He had for associate editor C. S. Carr, the quack. This magazine reeked with frauds, etc., etc." Tyrrell claims that the "Cascade used in health will prevent disease and used in sickness will cure any curable disease." "That his treatment is endorsed by distinguished physicians." "That the antiseptic tonic is a most important feature of the treatment." The facts are it will neither prevent nor cure disease, and it is not endorsed by leading physicians. The antiseptic tonic is a solution of common salt and borax. The J. B. L. (meaning joy, beauty, life) Cascade costs twelve dollars. A fountain syringe or common irrigator either of which will do everything the Cascade outfit can do and with much greater safety, costs $1.50.

Eye Medicines.—Bon-opto. This preparation is largely advertised in our press at present. Said to make "Weak eyes strong"—strengthen the sight 50 per cent. in a week. Recommended by prominent physicians" and other false claims. Analysis found it to contain Sod. Chloride, Zinc Sulphate, Boric acid and a small amount of menthol.

Murine.—The Halifax *Herald* of March 20, 1922, ran an advertisement recommending the use of Murine as an eye remedy. Analysis by the American Medical Association found in it 12 grains of borax to the ounce, a trace of berbarin or golden seal. It sells, I think, for one dollar an ounce, a fair price for 12 grains of borax. The promoters of this nostrum, B. McFatrich, M.D. and C. W. McFatrich at one time operated a spectacle-fitting business in Chicago.

While on the eye it might be well to say a word about that humbug who travels about the country peddling spectacles. Such an one usually succeeds in convincing many people that he possesses wonderful knowledge relative to the eye. Of course his main object in life is to sell glasses at a splendid profit. As a result of his administrations a good many eyes are likely ruined.

Kidney Remedies.—A good type of this class is found in Dodd's Kidney Pills—"for all kidney complaints." These are widely advertised and widely used. The accompanying literature works to the full the bogey of "Pain in the back means kidney disease." Dodd's pills contain jalap, hard soap, pot. nitrate, sod. bicarbonate, hard paraffin and wheat flour. Then there are Doan's Kidney Pills, or commonly called "backache pills." They contain, in addition to pot. nitrate, oil of juniper and hemlock pitch.

Before closing permit me to say a word about a comparatively new branch of quackery, viz.: Drugless Healing. Of late years the medical profession has been devoting considerable time to non-medical treatment. This has inspired the quack to get busy and turn this department into a money-making business. From time to time schools of drugless healing come into being and after successively deceiving the public, they have the effrontery to look to the Legislatures for recognition. The graduates of those schools, possessing no real training, but instead cheap diplomas, scatter about the country and pose as persons competent to treat diseases. Their clients are drawn almost entirely from the ignorant and neurasthenic classes which represent a fair percentage of our population.

In the foregoing pages sufficient has been said to justify one in concluding that in the "nostrum and quackery evil" lies a definite menace to the public health. Such being the case it is up to the physician to officer the public and carry war into the frauds' camp. In this physicians will be accused of being in bad faith and of being actuated by selfishness by the patent medicine makers. This is the weakest possible kind of argument—for with quackery and the nostrums rampant, the physician necessarily gets more patients. For every ten who are led to believe they are sick through reading exaggerated and lying advertisements, it is safe to assume at least one-half will consult physicians rather than apply to the quacks themselves. Every doctor knows that the reading of fake medical advertisements brings many patients to consult him. Such as the one with a transient pain in the back who has been led to believe that a serious kidney affection is his, or the one who has been terrified by the flaring "lost manhood" literature. To further supply the remedy let our medical societies devote space in the journal to exposition of the various frauds. A propaganda department in the Canadian Medical Association would help very materially. Let us begin right here—there are sufficient medical health officers present to make a splendid start. Let each one return home with the determination to do something to stem this evil. In this phase of the public health work our nurses can work wonders in the school as well as in the home. Of all the means to be employed perhaps education of the public is the most potent and since all education must begin with the little ones attending our schools, the opportunity for our nurses is apparent.

Get after the newspaper publishers whenever an occasion presents itself. Show them the harm they are doing and the good they are capable of doing by refusing to print anything that savors of quackery in their advertising departments. Take away the press from the nostrum vendor and forthwith his business passes out of existence. Let it be our ambition while endeavoring to clear our province of preventable disease, to clear also this great nuisance thus safeguarding the money, health and lives of many of our citizens. The money spent on nostrums in this province alone would, I think, be sufficient to maintain a most efficient health department and to boot we should have a healthier and happier people. Let us then take as our slogan: "Away with Quacks and Quackery."

My thanks are due the American Medical Association for analysis of preparations and other valuable information in preparing this paper.

Vitamines

BY ADAM H. WRIGHT, B.A., M.D., *Chairman of the Board of Health, Ontario.*

IN speaking of foodstuffs we shall make no reference to Nem. Feeding which is carried out by what is known as the Piquet School. The word nem is composed of the first letter of each of three words—"Nahrung einheit milch (nutrition similar to milk)—considering mothers' milk the basic food. This system seems admirably adapted for children, while our observations in this paper will refer especially to those who have passed the childhood period.

We shall consider the following constituents of food:—proteins, fats, sugars and starch without reference to inorganic salts and water. In connection therewith we shall speak of vitamines and calories endeavoring to talk in a way suitable to the public or popular ear, i.e. in a common sense manner.

VITAMINES.

In attempting to define the word vitamines a difficulty at once confronts us; we don't know what they are. A patron spoke crossly: "Say, waiter, what are those black specks in my cereal?" Waiter (after a close inspection)—"Donno, sir, unless it is some of them vitamines every one is talking about now."—*Life.*

Robert Hutchison says in part (Medical Annual, 1920): "Vitamines are bodies of unknown nature which though only present in minute quantities in food are yet essential for healthy nutrition.

Cecil Owens explains (The Prescriber, May, 1920), that while the food factors (proteins, fats, carbohydrates, etc.), are all necessary they alone are not sufficient to maintain life. Certain accessories are required, and for the present the common custom is to call them vitamines. The value of these is illustrated by one experiment; rats were fed on a mixture of caseinogen, starch, sugar, lard and inorganic salts—all carefully purified; results, decline and death. The rats were then fed for a limited time on this "pure"

Read before the Ontario Health Officers' Association, Toronto, May 29th and 30th, 1922.

nutritious diet; result, rapid decline. Then a small allowance of milk with the result that the animals again flourished.

Some say vitamines exist, but have not yet been isolated. Owen says their existence has not yet been demonstrated, yet he seems to have no doubt as to their real being. Let us consider that they exist, whatever they may be, and give a brief outline of present opinion regarding them:

There are three varieties of vitamines, A. B. C.

A. Vitamines: found in cod liver oil, butter, lean meat, liver, kidney, whole milk, cheese, eggs, fish, beans, cabbage, lettuce, spinach, carrots, nuts.

B. Vitamines: found in yeast extract, dried yeast, lean meat, liver, kidneys, milk, cheese, eggs, wheat, peas, cabbage, lettuce, spinach, bananas, nuts.

C. Vitamines: also called anti-scorbutic vitamines; found in lemon juice, orange juice, lean meat, liver, raw milk, cabbage, carrots, cooked potatoes, fresh beans, fresh lime juice, raspberries, apples, tomatoes.

Absence of A. causes rickets; B. beri-beri; and probably pellagra; C. scurvy.

Of these deficiency diseases rickets and scurvy are important; but the former is a constitutional disorder of childhood, generally preventable by proper feeding, but in this paper we are referred to adults and especially those over forty.

Dr. Hastings, M. O. H., Toronto, has happy methods of combining the scientific and practical and telling the public many wise things in a simple and understandable way. His April *Bulletin* is excellent. He recalls a statement made by Dooley years ago: that, after having experience with both Christian Science and modern surgery, he concluded that if Christian Scientists had a little more science, and surgeons a little more Christianity it would not matter much which you would employ if you had a good nurse.

We are glad to know that the Toronto Health Bulletin is appreciated and carefully read by a large number of people. In the April issue Dr. Hastings, after referring to the importance of a properly balanced diet, careful selection and good cooking of foods says: We should consume each day 3 to 4 ounces of proteins, or muscle building material, such as meats, eggs, milk, cheese, peas, beans, etc.; about the same amount of fats, such as butter, cream, fat meats, etc.; and about one pound of carbohydrates, such as starch and sugar, with fairly large amounts of vegetables, especially green vegetables which contain vitamines in abundance. The vitamines are found originally in green leaves and vegetables. Dr. Hastings very wisely adds: we should *get our vitamines from our daily food supply.*

This seems simple and it ought to be difficult in any ordinary dietary to exclude the "infinitesimal" amount of vitamines required. Vitamines seem to bear the same relation to the body nourishment that the sparks do to the carburetor. I forget who first gave this apt illustration, but I am quoting now from *Clinical Medicine*, May, 1922. We are told, however, by Richard and MacKinnon (Glasgow) Med. Jour., page 336, 1921) that scurvy does rather frequently occur in Glasgow and Edinburgh from faulty diet, mostly in males, the majority of whom lived in model lodging houses, where they bought and cooked their own food. Some of them did not "bother" with cooking vegetables, and their flesh food was always fried. Many of them lived for long periods on a diet mainly of tea, bread and margarin, sausage, ham, and tinned meats. Some kinds of white bread had no vitamines, margarin has none. The vitamines in the fried and tinned meats were probably destroyed by heat. As the use of margarin is much discussed, now let me say that vitamines are not found in vegetable margarin, lard, olive oil, cacao butter, linseed oil or hardened fat, but still these in their own way are all good foods.

The discovery of vitamines created great interest, and caused in the minds of many—both medical and lay—great expectations never quite realized, and also some mistakes, which did harm. One prominent English physician said about five years ago: "There are some principles called vitamines, which though present in abundance in most uncooked foods are nevertheless absent in foods which have been subjected to any culinary process . . . . They are of vital importance both to the very young and very old. Those with feeble digestions should be encouraged to take such foods as are known to contain them in relatively large quantities." This statement covers a good deal, and was for some years accepted, in its entirety, by a large proportion of dietitians in both Europe and America (including Canada.)

But the statement is full of errors as perhaps the majority of physicians formerly mistaken have discovered.

1. Vitamines are not absent from all cooked foods, although heat injures them and sometimes destroys them, as already mentioned, especially in certain fried and tinned meats. But a good cook can use much heat and still furnish satisfactory foods.

2. Vitamines, so far as we know now, do not directly help

feeble digestion, although it must be admitted that in the complete absence of vitamines neither digestion nor any other vital process can proceed.

3. No one should be "encouraged to take in large quantities foods known to contain vitamines."

Perhaps a cursory consideration of our homely democratic old friend cabbage will illustrate certain points better than a prolonged argument. The only food which, so far as we know now, is rich in all kinds of vitamines is cabbage. But we cannot live on cabbage alone. If it were possible to do so one would require to consume fifteen pounds a day in order to obtain sufficient energy units to keep him alive. You need only the live spark in the human carburetor, and if one-quarter of a teaspoonful of raw, or a full teaspoonful of cooked cabbage be sufficient for the requirements, it is surely unnecessary and unwise to take two or three tablespoonfuls of either raw or cooked cabbage unless your digestive powers are equal to the occasion.

The food problem is very important and complicated. This appears to be better appreciated in the case of children than in the *grown-ups*. But the difficulties of providing for adults after forty are greater than for infants and children, and these difficulties increase with each decade, especially after fifty. The mother should understand that while indigestion is serious in her baby it is much more so in her husband, and when the latter goes off color she should immediately hustle him off to a physician, preferably the family doctor if by good fortune her household happens to possess such a commodity. The alimentary canal is intricate in infancy and becomes still more complex in middle and old age. The everyday physician can help much by curing what are frequently termed the "trifling ailments" of the stomach, liver and bowels, which are too often quite serious.

Because we have pointed out certain fallacies regarding both professional and public opinion, we have no desire to cast any doubts as to the existence of vitamines, though still of unknown nature in a chemical sense (Hopkins, Cambridge University) ; On the contrary we believe, perhaps I should say, we know they are of extreme importance, "essential to nutrition, and even to life itself, though they have no intrinsic food value of their own" (Sir James Barr.)

It happens fortunately that directions as to properly balanced meals given by practically all modern dietitians are simple in character, easy to follow, and when our meals are prepared according to the rules laid down they will contain 100 per cent. of the vitamines required. And we can have this without any additional cost—perhaps with less cost if we eat less meat and more vegetables. When we do this we are following Dr. Hastings' recommendation to get our vitamines from our daily food supply.

In order to give emphasis to valuable advice we may add something to the remarks before referred to regarding the balanced meals. Let those who have passed 50 (no harm to many if they commence before 50) diminish the quantity of meats in their diet, and take plenty of the foods which contain the antiscorbutic vitamines, viz., raw cabbage, cooked cabbage, lemon juice, orange juice, runner beans, carrots, beets, cooked potatoes, onions, grapes, raspberries, apples, other fruits, with perhaps the admixture of some other foods containing chiefly fats, starchy matter, sugar and some proteins in addition to or instead of the meats before mentioned. This list is intended especially for dinner.

For the other two meals—breakfast and luncheon or supper, choice may be made from the following: cereals with cream or milk, toast and butter or bread and buter, tomatoes, salads, eggs, cheese, junket, fruits, cooked, preserved, canned or raw, and any of the other foods in the anti-scorbutic class as mentioned above.

We know but little about the vitamine and yeast preparations now advertised, but we quite agree with Dr. Hastings, other food experts and most of the leading medical journals that the proper methods of getting vitamines is from the daily food supply. Concentrated foods are always of doubtful utility—if not generally harmful.

We think it fortunate that the general public and all dietitians are taking a great interest in this subject and are conducting investigations in a scientific and practical way, and we should not be discouraged about the present limitations of our knowledge. "It is precisely because science is never sure of anything that it always advances." (Pasteur.)

Dental Hygiene

BY DR. H. W. BLACK, D.D.S., *Sydney, N.S.*

LATE President Roosevelt, in addressing Health Officers, State of New York, said,—"It is the prime requisite of every nation to have every man and woman effective units.· Men cannot be effective, they cannot be good, unless they are healthy. You public health men are dealing with the basic problem of citizenship."

Dental Hygiene and its relation to the public health of our country is to-day much more closely associated with the Medical profession than was even dreamed of only five or eight years ago. The results of the efforts of those engaged in Dental research, have brought to light a solution for many of the problems which have heretofore baffled the wisdom of the most eminent of the Medical profession.

Shortly before his death, Sir William Osler, in addressing the members of the Royal Dental Hospital, London, said,—"One of the greatest discoveries in medical science in the past ten years is the relation of diseases of the mouth to other diseases of the body." "If I were asked," said Dr. Osler, "which is the more detrimental to the health of the nation, alcohol or bad teeth, I should unhesitatingly say, bad teeth."

Health Departments, local, municipal and federal are to-day bending every effort to save the baby realizing a nation's greatest asset is a healthy child and in this movement tremendous strides are being made, but when we consider such statistics as provided by Dr. Wiley, pure food expert of New York, who says of the two and a half million babies born in America last year at present rate of mortality one-half that number have got to die before they reach the age of 23. Surely it behooves the authorities entrusted with the care of the health of our people to bend every effort to remedy this shocking state of affairs.

To-day we know on the authority of such leading men engaged in medical research as Cotton, Irons, Fitzgerald, Copeland, Bellings, Davis, Rosehow, Lyman, Fink, Price and Hunter that focal infection having its origin in the mouth such as abscess at the end of

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Read at the Annual Meeting, Association of M.H.O.'s of Nova Scotia, Sydney, July 4th, 1922.)

roots of teeth, pus pockets in the gums caused by tarter or irregularity or that curse of the human race from the dental viewpoint, Pyhorrhoea, any or all of which may be the actual or contributing cause of such dreaded diseases as Brights, Diabetes, Gall Bladder, Gastric Ulcers, Anaemia, Rheumatism, Pericarditis and Endocarditis, Auto-intoxication, Nervous prostration, Sciatica, Neuraliga, Neuritis, Artea Sclorosis, Goiter, Epilepsy, Insanity, Consumption, Facial Erruptions and numerous other disquieting dangerous or disfiguring disorders. "Cancer of the mouth," says Dr. Bloodgood of John Hopkins will be a thing of the past when the public understand and act on thorough mouth hygiene.

After many years of inspection and work with the children of our public schools, we find 90 per cent. of the children of school age have serious conditions arising from neglected decayed and abscessed teeth rendering proper mastication impossible and the pus absorption a most deteriating and degenerating force to overcome. In many cases dull and apparently mentally deficient children are rendered normal by the removal of diseased teeth. At our local school clinic where 921 cases have been treated and 3,000 operations performed, it is an every day occurrence to find six year molars so badly abscessed as to produce a serious necrosis condition of the maxillary bones which in not a few cases involves the Antrum. Without surgical intervention in such cases permanent, and perhaps fatal debilitation must follow. Last year in New York City 67,000 children failed to pass examinations because of lost time from school, 80 per cent. of which was due to tooth troubles. The cost to the School Board of New York City for repeating the work of that year was $1,100,000. Such statistics are to a large degree applicable to every town and city in our province. Heart trouble among children is to a very large extent the result of pus absorption from infected teeth. Dr. Irons, heart specialist of Chicago says of the 105,202 deaths last year in the United States from heart disease, one-half were due to diseased teeth; while Dr. Cotton, Superintendent of State Hospital for Insane, Trenton, N.J., says 50 per cent. of the cases coming under his care are due to Auto-intoxication resulting from an abscessed or pusy condition arising in the mouth, immediate result being obtained by removal of source of infection.

Many cases of acute mental depression are nothing more than toxemia having its origin in the oral cavity. In such cases the most expert dental advice available should be sought as so frequently the termination of such neglected cases is suicide.

Few diseases are more closely associated with oral infection than is consumption. While this disease may be primary, yet in very many cases it is secondary, the primary being oral infection such as infected tonsils, abscessed teeth, pus pockets in gums or pyorrhoea. During childhood where teeth are badly infected the tonsils are frequently in the same condition.

Anaemia thus caused so lowers the vitality as to render resistance to the tubercular germ impossible. Dr. Graham of Detroit says in every case where the haemoglobin count is below 70 and cannot be accounted for as temporary such as pregnancy or acute illness, we are not justified in placing the additional burden of infected teeth on the metabolism of such a patient. Dr. Graham says further, "Abnormally high or low blood pressure is usually the result of a toxemia or infection. Clinical experience has time and again shown that focal infections from dental organs are causative factors in abnormal blood pressure and the elimination of the infection wherever found is the logical procedure."

Judge Lindsay says Court Statistics show criminality in many cases, particularly in the juvenile, is due to a degenerated mental condition brought about by unhealthy conditions of the mouth. Institutions for punishment of all such criminals, both juvenile and senior, should have the most scientific dental advice available and part of the sentence imposed by the judge should include the order to have the mouth of the delinquent or criminal placed in a perfectly healthy condition. The two-fold result of such a sentence is obvious.

While I have scarcely scratched the surface of this tremendous subject, I hope you have been in some degree impressed with the importance of modern dental hygiene as a factor in the solution of the problems of public health. Such conditions in everyday medical practice, as are here mentioned, emphasize the need of closer relations between the modern medical and dental practitioner, and in the diagnosis of all cases of obscure infection, the importance of the invariable use of the dental X-ray.

Had time permitted I should have dealt with the last annual report of the dental department of the Kentville Sanatorium. I commend this report to the serious consideration of the health officials of this province, as it bears out the striking intimate association of dental infection with tuberculosis. The treatment of 951 cases of pyorrhoea from so small a selected gathering of people bears shocking evidence of the close relation existing between such mouth infection and tubercular trouble.

Now that the time allotted me is gone, I wish briefly to make a few suggestions from the dental viewpoint as a means of prevention of this condition, which is known to be directly or indirectly responsible for so large a part of the sickness and mortality of to-day.

First.—Through health centres, teach the prospective mothers to eat proper food and live properly, remembering the dental organs are in course of development from the seventh week of pre-natal life.

Second.—Teach the public the value and combination of foods required by children to produce strong dental organs, ever emphasizing the need for care of these organs from early childhood.

Third.—Provide municipal or Red Cross Dental Clinics for the under-privileged children and adults of the same class.

Fourth.—The appointment of a consulting dentist or dental board of the foremost dental practitioners of our province to act with the medical advisers to our municipal and provincial institutions, particularly the Sanatorium at Kentville, and the Nova Scotia Hospital for the Insane at Dartmouth.

Fifth.—The appointment to the staff of these institutions one or more modern dentists who must possess special aptitude and training for this class of work.

In conclusion I wish to say we do not claim all cases treated for septic disturbances have been cured by the removal of oral foci, but clinical reports of the past five years have proven beyond a shadow of a doubt that a very considerable percentage of the ill-health is directly or indirectly the result of oral sepsis.

I thank you, Mr. President, for this privilege of addressing this Association of Health Officers of our province and assure you of the fullest co-operation of the dental profession of Nova Scotia in your endeavours to improve public health.

The Victorian Order of Nurses for Canada

"A DAY WITH THE V.O.N."

By Isabel McMann, Yarmouth, N.S.

IN bringing to you the work-a-day life of the Victorian Order, we realize that while all of you have no doubt a passing acquaintance with the Victorian Order nurse yet perhaps many of you know very little of the real work she is doing in the homes of the people, laboring seven days a week for a safer motherhood, that our child life may be saved, that suffering may be relieved or even perchance that death may come a little easier in the home of the man who is unable for any reason to purchase professional care for himself.

And so we are going to give you just a simple word picture of a day with a rural nurse, taking you through scenes that are perhaps strange and unfamiliar, and to the doors of folk who are bearing heavy burdens.

1. Our first visit will be in response to an early call. Approaching the house, our first impression is made by the tidy front yard and the gravelled walk, speaking to us of true Canadian thrift and pride. The inside of the home is but an echo of the out. The doctor has gone but the little mother smiles to us her welcome. As we work about she tells us that her husband is working every day but on account of the cut in wages and the high cost of living it is only by very strict economy that they are able to stretch the pay envelope over the grocer, the butcher and the landlord, and that there seems to be nothing left with which to meet the extra demand. But this is one of the joys of the Victorian Order, to be able to give to this little new Canadian care in his first perilous days, guidance around the danger shoals of his first year, and later on as his friend, to teach him through his growing years habits of health that will send him out into the world sound in body and mind to take up the responsibilities developing upon every good Canadian citizen.

2. Now we must hurry along for our next call is by appointment to assist a doctor at operation. Arriving at the house you will find the whole family more or less upset. The patient herself, beset by many fears and misgivings, finds her last ounce of cour-

age gone with the appearance of the first black bag. And so as we work about in preparation we must try first to re-establish the family balance, and then assure the patient that she has nothing to fear. The operation completed, we must make the patient comfortable, put the room in order, and teach some one to carry on until we return.

3. As we leave the house, a doctor passing, spies us and remembers that a baby was born in the night and has had no care. Following his directions, we find ourselves at a shack in the centre of a field. The only door opens directly into the kitchen. The children are huddled together, the smaller ones not yet dressed. The father has gone early to work and the fire is out. The remnants of the breakfast are still on the table. Our first duty is to light a fire and help dress the little ones. Pushing back the dishes on the table, let us see what this family of growing boys and girls have had for their breakfast—a platter of meat holds the central position on the table, a knife on the side of the plate indicates that self service has been the method used. A can of condensed milk, a partial plate of bread, the remnants of a plate of cake, and the dregs of a strong cup of tea at each place. Right here we must stop and fire the first gun in the educational campaign in this home, teaching the children the first requirements for a healthy body and a sound mind. Passing through a curtained doorway and removing the heavy covering from the window placed there to keep out the storm of the night before, we find the little mother lying on an old grey blanket covered with one thin quilt, supplemented by the family coat and sweater.

As we begin our work we find there is no clean linen for the bed, and practically no clothes for baby. As we talk with the mother we learn that her husband is working and earning a fair wage, but weary with the burden of living she has become discouraged and ready to give up, and tells us she almost doesn't care any more. Here we find ourselves face to face with real tragedy—a family of children ready to be set adrift on the sea of life without a rudder, bound for shipwreck on the rocks, and some perhaps to find harbor later on in our penal institutions. If, however, at the end of our period of service we have been able to win our way into the heart and life of this discouraged woman so that she will call us her friend, then we may be able, by much patient, personal effort, to bring this woman back over the long, long road that she has gone to the place where she does care that her family is properly fed and clothed.

Let me take you back to that home some months later as that woman, placing her hand on my shoulder, with tears in her eyes, and her heart just bursting with gratitude, says to me: "Do you know things were slipping from me for a while but life seems worth living again, with someone to help." Before we leave we must find a neighbor who will keep watch on these children until the father returns.

4. And now, we must hurry along and leave all our worries and cares behind, for our next visit is to a little old lady who has long since found life a burden. For eight years she has been carried from her bed to her chair, and how she looks for the daily visit of the nurse, who not only ministers to her physical comfort but brings to her a little of the big outdoors!

5. And now, as we are passing along on our way to lunch we hear our name called out and looking up we see a woman leaning out of a window to ask us if we will come up and see her baby. Entering the kitchen we find the baby in a cradle close up by the kitchen fire. The little face is flushed with fever, and the child tossing restlessly keeps in motion the flies that are swarming just above. We will first carry the baby into a cool airy room and cover from the flies. The mother, with a look of anxiety on her face, tells us that her other baby was just like this and he died. We can only tell her that her baby is very ill and she must get a doctor, and perhaps he may arrange for a little white bed in a big clean hospital ward, in order that the baby may have a chance to live.

6. Hardly is lunch finished when the telephone rings and we are told that a doctor wants us right away. As we near the house we meet a man who inquires if we are going to his house, and with a look of almost despair on his face, tells us they have three new babies at his house. Entering the kitchen, we find the eight picininies already there seated meekly around the wall, having not yet recovered from the shock of having two brothers and one sister left all at one time. In a very small room, off the kitchen, we find the mother with her little new family. Turning as we enter, she says so quietly, "Truly to him that hath shall be given." Bending over the bed the storm from outside can be felt on the back of our neck, and we wonder if this frail little woman under such adverse surroundings will be able to breast the current into the harbor of complete recovery.

The dressing of three babies with not enough clothes for one is no mean problem in mathematics. But if the ones dressed in the family pillow cases were not artistic, they were at least comfortable. The eldest girl, not yet twelve years of age, is to be nurse and housekeeper for this family of thirteen. So while we are waiting we will teach her the things she must do to keep mother comfortable, and how to care for the babies.

7. Our next call is on a small boy who has been sent home from school with a sore eye. Entering by the front door and finding no one home but the lad, we decide that this is neighborhood visiting hour. Following the sound of running water to a dark corner of the kitchen, we are quickly aroused from any reverie we may have been enjoying, by the splashing of our feet in water which comes over the soles of our shoes, and we find the sink stopped up and running over. The mother meanwhile, advised of our arrival, has returned home. Asking her how she is going to get this water out, she, lifting a cup from the table and suiting her action to the words, says, "We dip it out," and throws it out the window. Following her, we are met by a cloud of flies, thus rudely disturbed from their resting place under the window.

By the time the eye is washed and cared for the rest of the family have returned. Two of the children have enlarged tonsils, and one has little more than half vision, and looking into the face of three little girls we read the same sad story of the mother—mentally deficient. Looking ahead but a few years into the future, we see three more mentally deficient mothers. And thus it goes on, for while we may treat the tonsils and eyesight, yet for this greater problem there seems to be no solution.

8. Just up the street is a new mother whom we left a week ago, and we will stop in and see how she is and invite her to Mothers' Conference.

9. Our next visit is in response to a call from a mother who has taken her baby to the doctor. She says he gave her a piece of paper and she does not understand what it means. So we will take off our coat and show her how to make the formula, teaching her to observe the rules of cleanliness and accuracy. To-morrow we will return and see her make it and be sure she understands.

Daylight by this time is almost gone and we will go along to our home.

10. Retiring a little earlier than usual, we are soon disturbed by the telephone. The doctor wants to know if we will come along and help him as soon as we can.

Finding our way down a side lane by the aid of our flash light, we are able to locate the house by the doctor's car. As we enter the lower hall, we hear some one above exclaim: "Oh! here is the nurse." The doctor is there and has with him a little girl of some nine or ten years.

After we have cared for the mother and babe, we will wait a few minutes to see that the immediate danger is over. While we are waiting we will teach the child, who is to care for her mother, what to do during the night and what to have ready for us in the morning.

And now, as we make our way home, thinking back over the day—for it has been long and hard—we wonder if after all it has been worth while. Then there flashes over us the remembrance of the hand grasp and the smile that spoke appreciation more truly than words. And we know that if we have helped to lift one burden it was worth while. But while to the nurse alone belongs the joy of the personal touch, yet it is to you, who by your interest and support make this work possible, must come the greater blessing. For into your life will be echoed that old, old message, that has been ringing down through the years: "Inasmuch as you did it unto one of the least of these ye did it unto Me."

Social Background

SOCIAL LEGISLATION—FEDERAL—1922.

The first session of the new Parliament has come and gone.

Many new members are in both Houses. In the Commons there are two new groups, the Progressives and Labour, numbering sixty-seven members. This large body of new men is almost without exception, sympathetic with socially progressive legislaton.

We are glad to say that a consderable number of new laws whch will be appreciated by our leaders were enacted. Briefly they are as follows:—

1. AMENDMENTS TO THE CRIMINAL CODE:

(1) The law is made more stringent for the prevention of cruelty to animals in transit on railways.

(2) Feeble-minded girls or women of any age are protected against carnal knowledge as previously idiots, imbeciles, insane, and the deaf and dumb were. Penalty—four years imprisonment. And a definition of a feeble-minded person is inserted in Section two taken from the Imperial Statutes, 1913.

(3) The following paragraphs are added as (d) and (e) in subsection 1 of Section 236 which prohibits lotteries, etc., "or (d) disposes of any goods, wares, or merchandise by any game or mode of chance or mixed chance and skill, in which the contestant or competitor pays money or other valuable consideration, or (e) induces any person to stake or hazard any money or other valuables, property or thing on the result of any dice game, shell game, punch board, coin table or on the operation of any Wheel of Fortune."

This makes it clear that the practise of selling cigars, etc., by throwing dice or disposing of candies, etc. by the punch board or inducing others to take chances on the use of any of the instruments named is criminal.

Penalty—Two years and $2.000.

(4) Sections 227 and 235 are amended so as to make them clear that guessing competitions as carried on by certain newspapers in the West are criminal.

Penalty—One year and $1,000.

Three other amendments aiming to protect young girls from 14 to 16 more effectively against indecent assault and carnal knowledge were passed by the Commons and struck out by the Senate as on two or three former occasions.

Three other very vital amendments sought were not introduced by the Minister of Justice, viz.:—

(a) Suppressing the legalized betting houses on race tracks.
(b) Prohibiting the publication of betting odds, tips, etc., that may be used by handbook men in their illegal business.
(c) Making adultery a crime.

2. *The Opium and Narcotic Drugs Act* was amended making its enforcement more easy, increasing penalties to seven years, and in case of giving drugs to minors, adding whipping at the discretion of the Magistrate, and in the case of aliens convict convicted, directing that they shall be deported after serving sentence.
3. *The Canada Temperance Act* is amended providing for the prohibition of exportation as well as importation of liquor where Provinces so desire.

The mode of procedure is for the Provincial Government to pass an order in council asking the Federal Government to proclaim this amendment in force in the Province concerned and fixing a date.

No referendum is required. By the same means the law may be suspended.

Exportation by distillers and brewers is not affected.

So-called "export warehouses" are prohibited, however.

Transportation is permitted only by common carriers by water or rail except for purposes of delivery from and to such carriers.

It is enacted also that "the court shall take judicial notice of the statutes and law of the Province into which the intoxicating liquor has been or is alleged to have been shipped, taken, brought, carried, or imported contrary to the provisions of their act and for the purposes of this Part IV., the term "intoxicating liquor" shall include all liquor deemed to be intoxicating under the law of the Province into which the liquor was sent, shipped, taken, brought, carried or imported."

This goes into force October 1st, 1922.

A new Part V. of the Canada Temperance Act prohibiting importation into British Columbia or Quebec, excepting to the Government or its Commission was passed by the Commons but struck out in the Senate.

4. A resolution, moved by Mr. W. G. Good, B.A., M.P., favoring the introduction of Proportional Representation in Federal elections was not brought to a vote but there was evidence that it would carry, and the Prime Minister declared his purpose to introduce this method in the Redistribution Act at a future session.

ONTARIO

The Provincial Board of Health of Ontario

The returns made of communicable diseases by Local Boards of Health for the month of August compare very favorably with the corresponding month of 1921.

It will be noticed in the comparative table a considerable reduction has taken place in diphtheria, typhoid and tuberculosis. It will also be observed an increase has taken place in Anterior Poliomyelitis (Infantile paralysis) of 70 cases with seven more deaths than in August of last year. The total cases reported for the Province are 92 with 10 deaths. Of this number the city of Hamilton had 54 cases with five deaths—the other 38 cases are rather more sporadic than epidemic being reported from some 20 municipalities with one or two cases each.

The increase in Venereal diseases for the month is due to the fact that some 188 cases occurring in July were not reported until August, hence the apparent increase over that of last year.

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE FOR THE MONTH OF AUGUST, 1922.

COMPARATIVE TABLE.

	1922		1921	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Small-pox	31	0	24	0
Scarlet Fever	141	4	114	3
Diphtheria	197	10	264	28
Measles	250	2	50	0
Whooping Cough	163	4	151	6
Typhoid	63	17	152	27
Tuberculosis	113	109	213	109
Infantile Paralysis	92	10	23	3
Cerebro-Spinal-Meningitis	7	6	3	1
Influenzal Pneumonia	......	7	2	2
Primary Pneumonia	......	72	—	83

VENEREAL DISEASES REPORTED BY MEDICAL OFFICERS OF HEALTH.

	Aug. 1922. Cases.	Aug. 1921 Cases.
Syphilis	247	144
Gonorrhoea	270	175
Chancroid	7	5
	524	324

News Notes

Dr. R. D. Defries, is acting Professor of Hygiene in the University of Toronto during the absence of Professor J. G. Fitzgerald, who will spend the winter in California, where he will lecture in the University of California.

Two addresses will be given on tuberculosis at the All-Canada Children's Week at Toronto, Sept. 25th to 30th. The major one will be upon the "Distribution of Contact Cases in the Prevention of Tuberculosis and the Infection of Children," the second contribution deals with "The Relation of Tuberculosis to the Financial Aspect of Mothers' Allowances."

On Monday, September 11th, the Canadian Social Hygiene Council held a special meeting in Convocation Hall, Toronto. The speakers were: Dr. A. H. Desloges of Montreal, who spoke on the "Anti-Venereal Campaign" in the Province of Quebec; Dr. Marcel Pinard, Chief Medical Consultant of Hospital Bousicault, who spoke on the "Syphilis and Pregnancy, Organization of Dispensaries to combat Venereal Diseases at Lying-in-Hospitals"; and Dr. Paul Gastou, Chief of the Central Laboratory of St. Louis Hospital for Skin and Syphilis, Paris, France, who spoke on "The Serology of Syphilis."

The All-Canada Children's Week will be held in Toronto, September 25th to 30th.

The Ontario Safety League had a unique exhibit at the Canadian National Exhibition.

The Secretary of the Canadian Tuberculosis Association, along with others, was granted the privilege of broadcasting a tuberculosis message during each week of the Toronto Exhibition. This courtesy and enterprise on the part of the Ontario Provincial Board of Health was very pleasing.

On Friday, September 15th, an organization meeting of the Ottawa Social Hygiene Council was held. Provisional officers include: Patron, Mayor Plant; President, Dr. F. J. Kidd; Secretary, Dr. G. H. Pearson; Treasurer, Mrs. H. S. Campbell.

A splendid tuberculosis conference of agencies and workers of the New England States has been arranged to meet at Poland Springs, Maine; during the last week of September. The Secretary of the Canadian Tuberculosis Association has been asked to contribute an address upon "Some Canadian Economic Phases," in a symposium dealing with "Public Health and the Public."

The thirteenth annual meeting of the American Child Hygiene Association will be held in Washington, D.C., October 12-14th. Speakers from Canada include Dr. W. T. Bell and Miss Mary Power of Toronto.

The first number of the Canadian Tuberculosis Association Bulletin has just been distributed to over 20,000 recipients in English and 3,000 in French. There are many features of interest in it, including a digest of tuberculosis deaths for eight of the nine provinces of Canada for 1921.

Dr. J. W. S. McCullough, Chief Officer of Health of Ontario, has just returned after a two months' visit to England, where he took this opportunity of studying the Public Health System in operation there. He will make a report thereupon to the Ontario Government. During his visit the Chief Officer addressed several societies and attended the annual banquet of the Royal Society of Medicine, the Conference of the Royal Sanitary Institute, of which he is a Fellow, at Bournemouth, and was given a complimentary luncheon by the National Council for Combating Venereal Disease.

Dr. McCullough reports a wet and cool summer in England, but says that notwithstanding unemployment and the burden of heavy taxes the English people are cheerful and settling down to business after the war. He predicts that London will soon resume her old position as the "Centre of the World."

Editorial

VIVISECTION.

THE anti-vivisector, the anti-vaccinationist and cranks in general are always with us. This statement is inspired by an announcement that a Doctor Hadwen of London, England, heralded as a prodigy of learning is in the near future to educate a Toronto audience on the all important subject of vivisection. Doubtless other Canadian audiences will be similarly favored.

There are one or two things which this gentleman and his friends should, it would seem, bear in mind. Among other things that they might in all fairness announce to their audiences should be the fact that if it were not for vivisection in some form the great majority of the great discoveries upon which modern preventive medicine is based would be denied to the human race. For instance, previous to the discovery of anti-toxin the mortality from Diphtheria was about thirty-five per cent. From Diphtheria treated immediately with anti-toxin there is no mortality whatever. Without vivisection there would be no anti-toxin. Tetanus in the early stages of the late war was a serious problem in the army. Tetanus bacilli abounded in the battlefields of France and many wounded soldiers succumbed not to wounds but to this dread infection. With the advent of tetanus anti-toxin—much of which came from our own Connaught Laboratories—the picture was changed and the routine administration of tetanus anti-toxin to wounded soldiers eliminated tetanus as a cause of death. Tetanus anti-toxin too is made possible because of vivisection. Again—and one can only mention a few of the values of vivisection—the modern diagnosis and treatment of Syphilis depends on various types of vivisection. The Wassermann reaction, without which we would scarcely recognize syphillis as a public health problem, depends on vivisection. Salvarsan, the great curative agent depended on vivisection for its discovery and depends on it for its preparation. And so one might go on down through the whole field of preventive medicine.

But to cover such details for the benefit of our friends, the anti-vivisectors and the anti-vaccinationists, is after all to waste one's wind. Fanticism is an emotion—not an intellectual process, and like love or hate, or ambition, it brooks no opposition. Far be it for any of us, mere specialists though we may be in the field of scientific disease prevention, to make any serious attempt to frustrate the pious enthusiasm of well meaning, though mistaken zealots. Doubtless in their enthusiasm, even though nowhere else, they will find their reward.

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How to Control Diphtheria in a Small Country Village

BY DR. J. A. MORGAN, M.O.H., *Smith Tp., Peterborough, Ont.*

THERE is no disease in which sanitary control can accomplish so much as in diphtheria because we are furnished in this instance not only with accurate and simple methods of bacteriological diagnosis of cases and carriers, but we have available a specific susceptibility test by means of which we can pick out the susceptibles in any group as well as methods of prophylactic protection which allow a choice between a speedy and a slow procedure, both of them of proven value. In this disease sanitary methods have made tremendous strides and greatly reduced both morbidity and a death rate since the introduction of bacteriological methods. In earlier years great epidemics of diphtheria used to spread through the great cities. In 1881 in Boston there were 218 deaths per 100,000. Quite naturally it has always been a school disease among children. The new-born child is endowed with a certain amount of diphtheria antitoxin by the mother thus rendering over 80 per cent. of the new-born up to six months immune when it begins to fade until between the years of 3 to 6 only 20 per cent. are immune. The number who are immune increase from 6 years on until at adult life 85 per cent. are immune.

Diphtheria has been relatively more common in a rural than in urban communities. It is said that if carelessness, ignorance and inertia were excluded the death rate to-day from diphtheria could be zero.

PROPHYLAXIS.

The chief means of preventing the spread of the disease are isolation, disinfection, rounding up carriers and immunization Everything in the room should be sterilized by disinfectants or

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Read before the Ontario Health Officers' Convention in Toronto, May 29th and 30th, 1922.

long exposure to sunlight and air. It is not probable that germs will live in the room longer than in the patients' tissues. Persons who have been exposed may be rendered immune by giving them one thousand to two thousand units of Antitoxin. This form of immunity last for a short time only and may give rise to a false security. It may not last longer than 10 days.

There is a more permanent method of immunization known as the Von Behring or Toxine Antitoxin method. In this case diphtheria toxine and antitoxin are given in definite proportions together. This is a slower method and not useful in an epidemic. In the country where quick results are needed one dose is given each week for three or four weeks, and in about six weeks from the time the first dose was given the person becomes immune. This immunity has been known to last for seven years (Park).

The reason why immunity brought about by Antitoxin lasts so short a time is that it is a foreign substance and is rapidly thrown out while the immunity produced by the Von Behring method is caused by Antitoxin which is manufactured in the body to combat the toxin introduced. This is not a foreign substance and much more persistent.

CARRIERS.

The problem of diphtheria carriers has become one of considerable importance and has been the subject of much study. In a community such as a large city about one person in 1,000 carries germs which under favorable conditions may be made to produce clinical diphtheria.

Carriers naturally increase in crowded communities. In the course of cold weather when catarrhas are common and as high as 17 per cent. of carriers has been seen in a military unit in which diphtheria and other respiratory diseases were common during a trans-Atlantic voyage.

The carrier may be either temporary or chronic. Convalescent cases usually get rid of the germs in two, three or four weeks. Healthy individuals exposed to cases or carriers as a rule do not keep their organisms more than a few days or a few weeks, depending somewhat on the condition of the mucous membrane. A small percentage remain chronic and are a menus to the community. A virulance test can be made in these cases and if they are not capable of transmitting the disease it is not necessary to isolate the patient any longer.

These people are immune to the disease as a rule but have conditions in their throat which favors the growth of the diphtheria germ.

TREATMENT OF CARRIERS may be divided into three groups:

1. *Germicides,* such as bichloride of mercury, silver nitrate, acetic acid, iodine, etc. These are not much use. Saturated aqueous solution of Gentian Violet has given good results in some cases. Its staining propensities are against it.
2. *Treatment of the Mucus,* membrane, such as diseased tonsils. Tonsils with large crypts adenoids sinews, etc., if associated with germs offers a point of attack. Removal of tonsils, adenoids or foreign bodies gives good results. If there is pharyngitis this should be treated.
3. Attempts to use vaccine or antitoxin is of no use because the patient is already supplied with his own vaccine and is immune.

Diphtheria is spread by direct contact, indirect contact, droplets and infected milk. 90 per cent. by direct contact with patients or carried mild or missed cases.

Incubation is from 1 to 3 days.

Clinically it appears on fauces, anterior nasal cavity, nasopharnyn, larynx, and down the trachae to the bifarcation and lower. This is not uncommon. It may extend even to the lungs. It will infect the eye, ear, broken skin surface and genitals.

DIAGNOSIS.

Clinical, which you all know, I will not speak of.

Cultural, by use of the swab which is an aid to recognize acurality cases which were once wrongly diagnosed, also to get mild cases and carriers. To get results from culture the swabs must be carefully taken. The swab must be gently and thoroughly rubbed over the infected area. Where there is a membrane, swab the edge rather than the centre of the membrane. I have been disappointed several times where I have taken a swab where there was a membrane by getting a negative report. When I would retake the swab wiping the edge of the membrane or where it was slightly separated I would get a positive. It is unsafe to accept a negative swab where clinical symptoms are definite. In case of carriers all areas must be swabbed. In case of laryngral cases it may be difficult to get a positive swab. In post nasal cases the swab must be passed up from the throat or along the floor of the nose. Culture should not be taken immediately after the use of antiseptic gargles, sprays or lozenges. When clinical symptoms are definite cultures should be repeated.

Over 50 per cent. of the community are immune due to a natural antitoxine. 1-30th of a unit per cubic centimeter of blood serum is sufficient to produce immunity.

Schick Test.—A simple and practical method of detecting immunes was developed by Schick, 1-50th of a minimal lethal dose of diphtheria toxine is injected in intracutaneously in the fore arm —no reaction develops if the patient is immune. If he has less than 1/30th unit per C.C. of blood however local redness and oedema occur within 24 to 48 hours, rarely later. This is usually 1 to 2 centimeters in diameter but may have an areola of 3 to 5 centimeters in diameter. The reaction increases for 3 to 4 days and usually subsides in 7 to 10 days, leaving a certain amount of pigmentation.

False reactions occur sometimes. These generally occur earlier and subside earlier. They are also more diffuse.

Old staple toxin must be used in accurate doses in this test. Acquired immunity from attacks of diphtheria varies greatly. It may last for years or it may be lost in a few weeks. Second attacks have occurred within two weeks.

Contagiousness is much less than in measles where droplets and a very high natural susceptibility are important features, or in smallpox when the contagiousness is striking.

The nasal form is far the most contagious as the discharge through methods and habits of handling may be readily spread about by contact, handkerchiefs, towels, toys, hands, etc.

Moreover nasal cases very often escape early detection under the guise of cold. This type also tends to mild constitutional and local signs and to a slow and prolonged course. Most extensive epidemics may be traced to this form. The laryngal cases on the other hand are the least contagious and in the early days were not thought to be diphtheria.

There are more cases between 3 and 5 years of age, although children between 1 and 2 are more susceptible. This is explained by the ones between 3 and 5 being out more, and more exposed. The duration of contagiousness varies greatly—in some instances, it is as short as a few days, while in others it may be months. In more than half the cases the organisms disappear within a few days after the subsidance of the inflammation. Although the organisms remain for months it does not follow according to the records that they are very infective.

With these facts before us let us consider the duty of the M. O. H. When a case of clinical diphtheria is reported to him in say a village of 200 with a school say 46 on the roll. Generally by the time a doctor has been called and pronounced on a case as clinical diphtheria the whole community has been exposed and a number have become infected. The M. O. H. should regard the whole community with suspicion and proceed accordingly. The school comes first and he should get there before the trustees close the school. He should insist on the school being scrubbed, not only the floor but the desks, and have it fumigated. He should engage a nurse, preferably one who has had experience in an isolation hospital and have her swab the throats of the pupils at school, having those with sore throats or sore noses remain at home until it is found out whether their swab is positive or negative. In this way the school is made the safest place in the village for a child. I had this done in one school and the first 31 swabs gave 6 carriers. On investigating their homes I found three well marked cases of diphtheria. These carriers should be isolated and the nurse should follow them up and look for clinical cases or carriers in the homes. Contacts should have a swab taken, also be given an immunizing dose of antitoxin. Children who remain away from school should have a swab taken and a negative report received before they are allowed to return to school. The nurse should visit unsanitary homes and as many others as is necessary, and wherever in doubt take swabs. A tactful nurse can enter many homes where a doctor could not and she will gather much valuable information. By securing the assistance of the teacher much assistance can be gained.

In the case spoken of above in a few days the nurse had rounded up all the carriers in the school and village and had immunized practically all the school children and those in the homes of carriers who were under or over school age. There was no more clinical cases developed and in due course by keeping these isolated the whole situation cleared up. In three weeks the nurse left the district with all throats free from germs except one which persisted for eleven weeks.

You may say that nurses are expensive, but are they?

In one week a nurse in a village will run down practically every carrier and suspect in the place, and by this alone will stop the spread and lessen the number of cases, and cut down the length of the epidemic to a minimum. Her fee for the week will be possibly $35.00, and how far would this go in paying expenses where there is sickness? It might pay for one mild case, but it would not pay for one funeral.

We divide the expense of the nurse equally between the School Board and the Township Council, and in that way neither one is badly hurt. In fact when they saw how well the system worked they insisted on her staying until the whole situation was cleared up.

The M. O. H. should secure the co-operation of the people, and if possible the medical men in the district, and here the nurse with the swab comes handy some times. The people should be given all the liberty that safety will allow remembering that practically every case is contracted from direct contact with a patient or carrier, and that quarantine may be eased off on members of the family who show negative swabs and who do not enter the room where the patient is. These people if they do not handle foodstuffs may be allowed to return to work, thus lessening the financial loss, also the inconvenience. In this way they will be less likely to try to conceal cases. In my experience the concealed cases are the ones that have been the greatest source of spread. When you have established quarantine insist that it be carried out as you have laid it down.

In conclusion the two points that I wish to bring particular to your notice are that—

1. Diphtheria is a dangerous community disease, causing the third most deaths from any infectious disease.

2. The trained nurse with the aid of cultures and antitoxin is your best means of attack, both financially and as regards results.

Some of the Results of Campaign Against Venereal Diseases in Montreal

BY N. FOURNIER, *Director of Venereal Diseases, Dispensary of Notre Dame Hospital, Montreal.*

WHEN, two years ago, I was entrusted by the Superior Board of Health of the Province of Quebec, with the care of organizing a dispensary for the treatment of venereal diseases at Notre Dame Hospital, I had not, as my fortunate colleagues of the Montreal General Hospital, a vast and sumptuous local at my disposal, but a mere vacant lot fifteen feet in width by ninety in length, running along one of the out-buildings of the Notre Dame. A small wooden construction was erected on it, and after taking away three and a half feet from the width as a necessary corridor for the circulation of the patients, the remaining space, eleven and a half feet by ninety were disposed of in the following order: first, next to the entrance, a waiting room, then in succession, a consultation room, a small laboratory in which I placed two microscopes and one ultra-microscope, a large treatment room, a small operating room, used also for endoscopy, a pharmacy and a small resting room in which were two beds, quite close to the exit-door. My staff consisted of a nun, a nurse, a pharmacist helper, a clerk and four assistant physicians, and so I set to work. In gonorrhoea I have used organic silver salts, permanganate of potassium and silver nitrate with ordinary internal treatment. In syphilis I have employed Novarsenobensol Billon and grey oil 40 p.c. I find grey oil less painful than salycilate of mercury. I give preference to Novarsenobensol Billon because it is a sure curative, without any obnoxious effects and very easy to inject, permitting one to do much work in a short time. The patient sitting on a chair receives his injection within five minutes and returns home immediately. I find that the same results can be obtained with this Neo as with 606, with less danger of accidents. It is also the opinion of Schamberg.

The diagnosis and treatment of gonorrhoea have been controlled with microscope, the treponema pallida has been searched with ultra-microscope in all chancres or their satellite bubos. The Was-

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Read at the Annual Meeting of the Canadian Public Health Association, St. John, N.B., June 6th, 1922.

serman reaction is made at the beginning, during and after each course of treatment. This reaction is performed with two antigens (plain alcoholic ext. and cholesterinised ext.), by a serologist trained in New York at John A. Fordyce's and at the Post Graduate Medical School. With only four beds at my disposal we performed a great many lumber punctures and also a few intraspinal treatments by the Swift-Ellis method simply or modified by Ogilvie. At the opening of our clinic our space was invaded by an avalanche of patients of all sorts. The syphilitic especially offered the most painful sight. There were some of all descriptions and conditions, from children carried in their mother's arms to men as old as ninety, poor miserable wretches, unemployed, and in some cases, whole families were contaminated. Several had dealt with mountebanks, others with unscrupulous or ignorant physicians, who had promised them an easy cure with three, six or even ten injections, after being charged a ridiculously high fee. Many of them had used some friend's medicine, others had not been treated at all for want of money and were real moving hot-beds of infection. We then started to work, Dr. A. H. Desloges, Director of the Committee of Venereal Diseases, addressed many meetings illustrating with moving pictures. Very often in the company of priests, my assistants and I, armed with syringes, injected arsenic and mercury. We did much work, seeing as many as 150 in a day. I have not had time yet to classify the results of all the treatments given, but what I can affirm without fear is that we have done a great deal of good to the poor and to the sick. We have cured gonorrhoea cases, we have cured syphilis cases, at least serologically. We have bettered the condition of many patients, and have brought rays of hope to them all. The aspect of our clinic was transformed two years ago. We see no more of those repulsive cases of secondaries neglected or aggravated by uncleanliness, we hear no more of patients coming from a quack, generally, now, patients come to clinic for recent accidents, for chancres, for a beginning roseole, for latent syphilis treated or untreated, for neurosyphilis treated by the old method of mercury pills or simply for a blood test before contracting marriage. Dr. Desloges' conferences have evidently instructed the people, he has been a fine instructor, and I am glad to acknowledge it on this occasion. Our injections too, I think, must have done good work.

There is no doubt the medical profession also has benefited from the campaign, if one judges by the great many serological examinations required from the provincial laboratory, and by the many young physicians who have come to our clinic for a training stage. The foundation of the provincial laboratory has been of great value to all physicians who treat cases of syphilis, for now any one can have all the blood tests he wants free, while before he had to pay ten dollars for such an examination.

In conclusion, this campaign has, in my opinion, been of great benefit to the people of the city of Montreal, and I might say to the people of the whole province of Quebec in showing the dangers of venereal diseases and also the necessity of being proper and early treatment for any one who has been infected. It has provided for the innocent victims and the poor the means of being cured, and also prevented the spreading of the diseases. Finally, it has been a way of popularizing the scientific and modern methods of treatment of venereal diseases.

To all those who have worked for the organization of this campaign I am happy to offer, on this occasion, my sincere congratulations and thanks.

Some Light on the Nature of the Substances Responsible for Complement Fixation in Tuberculosis

BY DR. R. W. HODGE, Toronto.

WHILE working with sera of tuberculous patients* it became necessary to note the effect of (a) the removal of lipoids and (b) the precipitation of globulins, on certain serum reactions. The results obtained seemed sufficiently clear cut for presentation in the present paper.

PART A—LIPOIDS IN TUBERCULO SERUM REACTIONS.

The relationship of lipoids to immunity reactions has been a subject of great interest in recent years. Krumweide and Noble[1] have recently been unable to confirm the claim made by Stuber that agglutinins are lipoidal in nature. Levaditi and Yamanouchi[2] have claimed that the substances in syphilitic sera responsible for the Wassermann reaction, can be extracted with alcohol. Noguchi[3] was unable to confirm this observation, he concluded that the reacting substance in syphilitic serum was non-lipoidal in character. Kolmer and Pearce[4] found that ether and chloroform narcosis tended to diminish the concentration of non-specific fixation bodies in normal, inactivated dog and rabbit serum. Observations on the serum of humans, withdrawn during and immediately following ether narcosis, show that there may be a profound alteration of the Wassermann reaction under these conditions. It seems likely then that alterations in the lipoidal content of serum must have an important bearing on this reaction. Kolmer[5] further showed that extraction of normal rabbit and dog serum with ether tends to remove a large portion of the serum constituents responsible for non-specific fixation with lipoidal and bacterial antigens; he also

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*This work was done in association with Dr. A. H. W. Caulfield and his colleagues, who were investigating the co-relation of the clinical and laboratory findings in tuberculosis. The results of these investigations will be published at an early date. The funds for a large part of the present work were supplied by the Department of Soldiers' Civil Re-establishment.

Read at the Annual Meeting of the Canadian Public Health Association, St. John, N.B., June 6th, 1922.

found that feeding lecithin to these animals was followed by increased power of the inactivated serum to absorb complement. Noguchi[6] has shown that only sera containing lecithin, fatty acids or soaps are capable of activating cobra venom (rendering it hemolytic). Venom hemolysis indicates the possible important relationship of lipoids to hemolytic complement, venom containing the hemolytic amboceptor and the complement probably being derived from corpuscular lecithin (Kolmer). Calmette, Massol and Breton[7] studying the activating power of different sera on cobra venom found that inactivated sera of tuberculous patients very frequently showed this characteristic. Calmette attempted to use this reaction in the diagnosis of tuberculosis. In 77 sera from tuberculous patients the results obtained were as follows:

Turban	1	Reaction	+ in 76%
"	2	"	+ in 57%
"	3	"	+ 70%
In 26 normal sera		"	+ in 37%

He also observed this reaction in the serum of patients suffering from syphilis, in cerebro spinal meningitis, in Addison's disease, in general paralysis of the insane, and in severe maladies associated with more or less profound affection of the nerve cells or supra renal capsules. Free lecithin was also found to occur in the serum of anaesthetized subjects. Finally the inactivated serum of certain animals is normally active, the horse, dog, rat, goat and rabbit are in this class. Kolmer[5] has drawn attention to the frequency with which non-specific complement fixation bodies are present in normal inactivated dog and rabbit serum and he has shown that extraction with ether tends to remove these bodies. Calmette's observations show that the serum of these animals normally contains large amounts of lecithin, fatty acids or soaps; this goes to confirm Kolmer's opinion that the substances responsible for the non-specific fixation with these sera are lipoidal in character.

It is evident from even such an incomplete review of the literature that lipoids have a not inconsiderable influence on the Wassermann reaction (although the weight of opinion considers the reacting substances non-lipoidal in nature), that the lipoidal content of certain animal sera favors conditions for the developmet of non-specific fixation, and finally that the lipoidal content of most tuberculous sera is higher than normal. Our own work has been an attempt to show in what way the lipoidal content of tuberculous sera is related to the complement fixation in tuberculosis.

Methods:—The object of this part of the work was to extract the lipoids from the serum as completely as possible and to note the effect of this removal on the reactions under examination. In the earlier work an attempt was made to extract the lipoids by thoroughly mixing the serum with petroleum ether (4 volumes of petroleum ether to 1 volume of serum). After extraction the serum was separated by centrifugalization. The results with this method however, proved quite indeterminate in a series of 90 sera tested. It was thought that the method employed might remove the lipoids only very incompletely, accordingly Friedemann and Herzfeld's method[8] slightly modified, was used. 0.5 cc. of serum was spread on a filter paper and dried in an electric oven at 45° C. for 1 hour. One volume dried in this way was reserved for a control; to the other volume in a test tube was added a mixture of equal parts of absolute alcohol, ether and chloroform. The tubes were shaken half an hour after which the mixture was poured off and the filter paper dried at 37° C. Saline was then added to the dried filter paper to make a dilution of 1 in 5; the filter paper was worked into a pulp, the liquid pressed out, poured into another tube and centrifugalized to remove the particles of filter paper. The control portion of the serum was treated in the same way except that the extraction with alcohol, chloroform and ether was omitted. Using this method of extraction 15 tuberculous sera showing various degrees of fixation from weakly positive to very strongly positive were tested. The degree of fixation given by the extracted serum was compared with (1) that given by the untreated serum and (2) with that given by the dried and redissolved serum.

The results in the control untreated fraction (dilution 1:10) and in the control dried fraction (dilution 1:5) were quite comparable, there being only a moderate loss of fixation bodies in the latter. The dried and extracted sera however, in almost every instance, showed a marked loss of power of fixation. In many instances the loss of power of fixation was complete. It is evident then that extraction in this manner either destroys or removes,† substances wholly or partially responsible for the development of the complement fixation reaction in sera of tuberculous patients.

It was thought that comparable results might be obtained by extraction of sera of animals immunized with the tubercle bacillus. The results of extraction of such fixation guinea pig and rabbit sera however, failed to demonstrate a definite loss of power of fixation in these instances. Assuming that the fixation bodies are of similar chemical constitution in human, guinea pig and rabbit sera these results are puzzling. The fact that the sera of the artificially immunized animals showed a higher concentration of fixation bodies than the human tuberculous sera may be a possible explanation, as here the extraction of lipoids may be incomplete. It is true that the method employed does not completely free sera of lipoids. This has been demonstrated by Suranyi[9], who followed the technique of Friedemann and Herzfeld closely and then extracted the supposedly lipoid free serum in a soxhlet apparatus. He found that frequently as much as 25 per cent. of the serum lipoids remained after extraction by the method of Friedemann and Herzfeld.

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†An attempt was made to test the alcohol, chloroform, ether extractives for complement fixation bodies without success on account of the high anti-complementary power of this fraction.

PART B—PROTEINS IN TUBERCULO SERUM REACTIONS.

The role of protens in certain immunity reactions is well recognized in others less definitely so. Huntoon[10] and others, in an extensive study of the chemical nature of agglutinins, bactericidal and protective substances in immune sera, concluded that such antibodies were colloidal in nature; they were not affected by trypsin over considerable periods, were not in the euglobulin or psuedogloblin fractions and were not soluble in ether.

The relationship of proteins to complement fixation has not been definitely determined. Noguchi[3] found that sera of untreated syphilitics almost universally showed an increased globulin content, there was however, no complete parallelism between this increased globulin content and the positive Wassermann reaction. Rowe[11] found an increased globulin content in sera in all infections with the exception of acute tonsillitis, typhoid fever and chronic bronchitis. He also found that the Wassermann reaction is not dependent on a quantitative increase of serum globulins. Kapsenberg[12] has recently shown that the fixation bodies responsible for the development of the Wassermann reaction are completely removed when the globulin fraction is precipitated with ammonium sulphate and that they can be demonstrated in the globulin fraction. Nishida and Petroff[13] in a study of fixation bodies in tuberculous sera concluded that these substances are either globulins or that they are absorbed by the globulin fraction of the serum when it is precipitated by ammonium sulphate. Calmette[14] working with the serum of cows immunized by the tubercle bacillus, precipitated the euglobulin fraction by bubbling carbon dioxide through the diluted serum and found that the fixation bodies remained in the supernatant fluid.

In the present work euglobulin was precipitated by bubbling carbon dioxide through serum‡ diluted 1 in 10 with distilled water till a heavy turbidity developed. The sera were allowed to stand for two hours till a flocculent precipitate was formed; they were then centrifugalized. The supernatant fluid was poured off and rendered isotonic. The precipitate was redissolved in saline to give the original 1 in 10 dilution.

The results of the precipitation of euglobulin in human sera showing various degrees of fixation and in the sera from a rabbit and guinea pig which had previously been immunized with the tubercle bacillus were definite and uniform.

The fixation bodies in the supernatant fluid are found to be in practically the same concentration as in the untreated serum. There is only an occasional and slight amount of fixation in the euglobulin fraction.

Renaux[15] separated the euglobulin from syphilitic sera using this method. He found that the fixation bodies remained in the supernatant fluid and appeared only irregularly in the euglobulin precipitate. Renaux in addition made a very interesting observation. He separated the diluted serum into two portions to one of which he added a small amount of lipoid emulsion (cholesterinized heart extract) ; the two portions of diluted serum were now treated with carbon dioxide in the ordinary way. Testing the supernatant fluid and euglobulin for fixation bodies now showed that in the case of the serum previously treated with lipoids the fixation bodies had been completely transferred to the euglobulin sediment; in the serum free from lipoids the fixation bodies, of course, remained in the supernatant fluid. We were able to repeat Renaux's experiment in syphilitic sera with the same result. We were also able to demonstrate a comparable phenomenon in tuberculous sera. Methyl alcohol extract of the tubercle bacillus was the antigen chosen because (1) of its lipoidal character and (2) because many sera showing strong positive fixation with an antigen composed of the whole tubercle bacillus (admittedly the most superior antigen), will also give a strong positive fixation with the methyl alcohol antigen. When methyl alcohol antigen is added to such a serum and the euglobulin is precipitated it is found that the fixation bodies are transferred from the supernatant fluid to the sediment. When however, syphilitic antigen or alcohol-ether extract of the tubercle bacillus is added to such a serum before the euglobulin is precipitated no alteration in the normal distribution of the fixation bodies occurs. It seems likely then that the lipodial antigen in each case is carried down with the euglobulin sediment and that it pulls down the corresponding fixation bodies in combination.

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‡Sera were inactivated at 56° for half an hour, and when the inhibitive reaction was being investigated all sera were previously extracted with sheep cells to remove the natural amboceptor.

PART C—DISCUSSION.

The evidence presented indicates that the fixation bodies in human tuberculous sera are lipoidal in character because:

(a) Extraction of dried human sera with alcohol, chloroform and ether removes or destroys these bodies almost completely.

(b) When the sera are dried on filter paper and redissolved in saline there is only a moderate loss of fixation power. This indicates that the active substances redissolve quite readily; protein does not redissolve readily after drying.

(c) Fixation bodies occur only irregularly in the euglobulin fraction of the serum; they occur in the supernatant fluid in the same concentration as in the untreated serum.

At first sight these observations are opposed to those of Nishida and Petroff who found that the tubercle-complement fixation bodies appeared in the globulin sediment precipitated by ammonium sulphate. Kapsenberg also found that the fixation bodies responsible for the Wassermann reaction were precipitated in this way. Our own observations have shown, however, that the complete precipitation of fixation bodies in syphilitic sera is not necessarily accompanied by the complete precipitation of globulin. This is shown by the fact that almost complete precipitation of syphilitic fixation bodies is obtained when lipoidal emulsion (Wassermann antigen) is added to the diluted serum before the precipitation of euglobulin by carbon dioxide. In this experiment only the euglobulin is precipitated, the sediment is not increased in amount and the remaining globulin fraction can be demonstrated in the supernatant fluid by half saturation with ammonium sulphate. Is is evident then that the fixation bodies in syphilitic sera are not globulins, but are merely carried down with the globulin fraction when it is completely precipitated. It seems altogether likely that the precipitation of the tuberculo complement fixation bodies in the globulin sediment obtained with ammonium sulphate is of a similar nature.

REFERENCES:

[1]. Krumweide and Noble. Jour. Immunology, 1921, 6, 201.
[2]. Levatidi and Yamanouchi. Compt. Rend. Soc. de Biol, 1908, 44.
[3]. Noguchi, H. J. Exp. Med., 1909, 11, 84.
[4]. Kolmer and Pearce. Jour. Inf. Diseases, 1916, 18, 32.
[5]. Kolmer. Jour. Inf. Diseases, 1916, 18, 46.
[6]. Noguchi, H. Cited by Calmette.
[7]. Calmette, Massol and Breton. C. R. Acad. des Science, 1908, Mar. 30.
[8]. Friedemann, W., and Herzfeld, E. Berl. Klin. Woch., 1911, B, 84, 373.
[9]. Suranyi. Berl. Klin. Woch., 1912, 409.
[10]. Huntoon, F. M. Jour. Immunology, 1921, 6, 117.
[11]. Rowe, A. H. Arch. Int. Med., 1916, 18, 455.
[12]. Kapsenberg, M. Annales de L'Institut Pasteur, 1921, 35.
[13]. Nishida, Y and Petroff, S.A. Am. Rev. Tuberculosis, 1920, 4, 322.
[14]. Calmette, A. L'Infection Bacillaire et la Tuberculeose, p. 501.
[15]. Renaux, E. Compt. Rend. Soc. de Biol., 1920, 83, 1299.

"A Safe and Clean Milk Supply"

BY E. H. STONEHOUSE, *President, National Dairy Council of Canada.*

IMPORTANCE OF MILK AS A FOOD.

IT is only within very recent years that the food value of milk has begun to be even approximately appreciated, while its medicinal value has been almost entirely lost sight of. Recent experiments both in the United States and Canada have established beyond the peradventure of a doubt that as a food for growing boys and girls milk is indispensable. In the first place it is nature's food. Under natural conditions until a child is at least a year old the mother's milk is the perfect food, but unfortunately to-day a very large proporiton of our young mothers ignore their responsibility in this matter and so the burden falls upon the foster mother of the race, the good old dairy cow. Granted that the mother has been able to nurse her child for the full nursing period, the time soon comes when some substitute must be found that will fill its place and furnish the elements that have been almost entirely relied upon for growth and development up to this time. Dairy milk is the natural continuation of the child feeding process, and it is absolutely necessary, if our growing boys and girls are to have normal development, that they should have milk in sufficient quantities.

UNDERNOURISHMENT AND ITS RESULTS.

It is a startling fact that a large percentage of our boys and girls of school age are undernourished and very much under developed. This results in a very much impaired capacity to learn. One very striking result of recent milk feeding experiments in Toronto has been that the mental development practically keeps pace with the physical. Boys and girls who appear dull and unable to learn, after one month's milk feeding, were able to learn their lessons and appeared well along the road to normalcy.

Read before the Ontario Health Officers' Convention in Toronto, May 29th and 30th, 1922.

MILK FEEDING IN SCHOOLS.

Some statments made by teachers in our public schools may be of interest and you will excuse me if I quote a few of them:

1. Much more regular in attendance, more interested in the work, able to concentrate for a longer time, hand control much improved, tries to compete.
2. I can notice an improvement in ability to work, general health and happiness.
3. One has an increase of 25 per cent. in the month's work. All seem happier, and less listless.
4. Much healthier, brighter and quicker, lost a "Don't care" attitude.
5. Marked improvement in general alertness, physique, and mental capabilities.
6. They have improved greatly both physically and mentally. In place of listlessness there is now an active interest in all work. The eyes are brighter, and the skin is a brighter colour.
7. They not only work better and get along faster and more easily with their work, but they are more active in their play and take more interest in life.
8. There has been in every case a decided improvement in their ability to do work. They are brighter and more alert.

Also the gain in weight by many of these children was phenomenal when we take into consideration the fact that in many instances they were at a standstill or possibly were retrograding. A few instances may be of interest:

In the case of three boys the results were as follows:

Normal Wt.	Actual Wt.				Gain.
56	50	56¼	58¼	58¼	8¼
64	55¾	55¼	61¾	61	5¼
86		67½	72½	72	4½

In the case of three girls the results were as follows:

60	57¼	60¼	62¼	63	5¾
55¼	53¼	56½	58½	59¾	6½
51	41¼		46¾	47¾	6½

These are just cases taken from a list submitted to us. These children were weighed four times during the period of time and the weight at each weighing is given above.

There is no doubt at all that milk feeding in our public schools will be very rapidly extended, and in a few years every school in the province will be paying particular attention to this feature.

This being the case, it is necessary that these boys and girls must have a product that is perfectly safe and sanitary.

SAFE MILK.

Clean milk is, of course, our first objective, and if it were possible to have perfectly clean milk, handled in a perfectly clean manner and properly cared for all the way from the cow to the mouth of the consumer, many of the methods and precautions that are now necessary, and which mean a very materially increased cost, could be dispensed with, but we must remember, in the first instance, that the millions of gallons of milk required for our whole milk supply are produced upon thousands of farms, and are handled by tens of thousands of individuals, some good, some indifferent, and some, I am sorry to say, positively bad. It is this condition that we must grapple with. First, by exercising all possible care in the production of milk. This can only be done by an extended system of education.

EDUCATION IN MILK PRODUCTION.

Practically every individual connected with the dairy business should have a knowledge of the product they handle, its perishable nature and its susceptibility to contamination and the danger to the ultimate consumer if certain commonsense precautions are neglected. This is a very large order, which we have scarcely begun as yet to fill. Toronto and certain of our other Ontario cities have made a start, but the great majority of our centres of population have not even considered the matter, and here devolves a responsibility upon our provincial medical health officers. In nearly every city or town great precautions have been taken in regard to the water supply. No expense is considered too great to insure that disease organisms in the water are destroyed, while milk, a fluid that goes into every home, and with far greater possibilities for mischief is almost entirely overlooked. I realize the difficulty of overcoming the objections that are often urged. I can appreciate the fact that it is hard to overcome the indifference, and often the entire opposition to any measures looking to the safeguarding of the milk supply, and while arbitrary action is very seldom justifiable, yet I believe in this instance, where the public safety is at stake, some form of protection, province, if not Dominion wide, should be instituted. This brings me to the question of pasteurization of milk.

PROTECTION AND PASTEURIZATION.

Personally, if I were dictator, I would pass a Dominion law tomorrow, if that were possible, providing for the compulsory pasteurization of milk in every city, town and village. Proper pasteurization of milk means absolutely safe milk, and safety is the first consideration. If we reach the point even after years of education that we could have practically certified milk, then we could dispense with pasteurization, but even then we would be face to face with the fact that clean milk would not necessarily mean safe milk. Until that time comes, it is our duty to use every means at our disposal to eliminate every element of danger.

PRECAUTIONS IN PRODUCTION.

Now let us go back a little way and trace the process of milk production and some of the essentials if we are to have a measurably clean, sanitary milk. I take it there is more or less inspection over the whole province, that is, I mean that the Medical Health Officers consider it part of their duties to at least acquaint themselves with the sources of supply and the farms upon which milk is produced. In the first place, the herd should be as far as possible free from disease. This, of course, cannot be accurately ascertained, except by a very complete test by a competent veterinarian, and would not be practicable in all cases, but the average medical health officer can tell at a glance by running his eye over the herd, noting their condition, the state of their coat, the brightness of the eye, moist appearance of the nose, etc., as to whether the herd is in a fairly saisfactory condition. Then the stabling of the herd. The first consideration would be abundance of light. Where you have airy, well lighted, well ventilated stables, kept free from dust and cobwebs, whitewashed occasionally, and with cement floors, and proper drainage, etc., you will not very often find a herd to which serious objection can be taken. But a herd in run-down condition, with dead, lifeless-looking hair, lack lustre eyes, etc., before allowing milk from a herd of this kind to be supplied to the public I think that certainly an investigation by a competent veterinary would be in order. Then I would keep my eye upon the proprietor and his family. I often pride myself that dairymen from the very nature of their business are the very best of our rural population. They are usually cleanly in their person, correct in their habits, and conscientious in their method of conducting their business. When I find the farmer and the farmer's wife, his sons and his daughters partaking of these characteristics, I would feel inclined to consider their farm a safe source of supply.

Just a word as to the care of the cows. It is the practice of many dairymen to periodically clip their cows over the whole body. Given proper stables, freedom from drafts, etc., this is a very desirable condition, as it enables the cows to be thoroughly groomed, and does away with the possibility of a great deal of fine dust dropping into the milk during the milking process, but in any case, the flanks, udder and under parts of the cow surrounding the udder should be clipped, and all long hair carefully removed. Preceding the milking operation the udder should be carefully wiped off with a damp cloth, and the flanks brushed with a soft brush. The milker should see that his hands are perfectly clean and that there is no dust upon his clothing. After milking the milk should be immediately removed from the stables. If it is possible, and the milk house is not too far removed, as each cow is milked the milk might be placed in the cooling vats. The quicker the temperature of the milk can be lowered and retained at low temperature, the greater the keeping qualities of the milk, and the slower the development of harmful bacteria. After removal to the milk house and the cooling tanks the milk should be kept carefully covered to avoid the possibility of any dust, dirt, flies, etc., getting into the milk, and should be kept covered until the moment of shipment.

TRANSPORT BY RAIL OR TRUCK.

Precautions should be taken for the care of the milk during transit. If shipped by rail over long distances, ice should be used in the cars. If shipped by truck or waggon the cans should be carefully protected by a canopy, not immediately in contact with the cans, but allowing of free circulation of air and conveyed as expeditiously as possible to its destination.

CO-OPERATION TO OBTAIN RESULTS.

The Ontario Milk Producers' Association is doing everything possible, both of itself and in co-operation with every other organization, to obtain better conditions, and to educate their producers to a point where they will take a pride in their business. Very gratifying results have already been obtained, but by a full understanding and complete co-operation among all interested in this branch of the industry every important improvement can be obtained in a very short time. I appreciate the importance of the place the medical health officers of Ontario occupy in this essential work and wish to extend to them every assistance, and to assure them of my hearty co-operation in every step taken for the betterment of the milk supply.

The Public Health Nurse in Tuberculosis Work

BY DR. K. J. MCLEOD, *Medical Health Officer, Sydney, N.S.*

TUBERCULOSIS has been so long with us that we have almost come to believe that it is here to stay for all time, and yet, even with the imperfect work that has been done and is being done, tuberculosis is coming well under control. Education and publicity have done more towards this end probably than anything else. Sanitaria, we all admit, have been a beacon light and example to all Public Health Departments, and the general public as well. Notwithstanding all that has been done, tuberculosis still carries off its tremendous toll, until we sometimes wonder whether we are on the right track toward its eradication.

Sanitaria have done excellent work, and it would seem impossible to do without them, but it is an open question whether a large amount of money at present expended on the building and upkeep of many of them, could not be better utilized in other ways, treating and preventing disease.

The number reached through sanitarium treatment is very limited, indeed. For instance, there are about 7,000 open cases in Nova Scotia with a yearly death rate of over 700, and yet, only 187 patients were admitted 1920-21. It can readily be seen the small percentage receiving hospital treatment, and while it is conceded that Kentville Sanitarium is in the forefront, under Dr. Miller's supervision, and equals any in the Dominion, the contention is made that the percentage treated is exceedingly small, compared with the large percentage ill in this Province. If there are 7,000 active cases there must be thousands in various stages, perhaps many unrecognized and spreading infection in all directions. In Cape Breton County there are, perhaps, well over 1,000 cases of active tuberculosis, with a death rate of about 100 yearly, and yet only 9 were admitted for sanitarium treatment during the years 1920-21. The Island of Cape Breton has probably 1,500, with an average death rate of 150, and yet only 19 patients were admitted to the Sanitarium, leaving well over 1,400 cases free to spread the disease and many receiving inadequate treatment and care. It is safe to say

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Read at the Annual Meeting of the Medical Health Officers of Nova Scotia, Sydney, July 4th, 1922.

that the experience of Cape Breton County can be duplicated in any county in the Dominion.

Allow me to give the experience of visiting tuberculosis cases in Sydney in one day, and while this is very very exceptional, it may give some idea of the point I am trying to make:

The first house contained an advanced case with several small children.

The second house contained a walking case, mother with several children.

The third house contained a walking case, mother with several children.

The fourth house contained father and mother with several children.

The fifth house contained father with several children.

The sixth house contained mother with several children.

In the first place, not one of these patients has the slightest chance of being sent to the Sanitarium, and in the second, if they have, the children who have been exposed to infection would probably have very little done for them, until such time as one or more of them are taken ill with the disease. Only advice could be given and help in the way of food by the Anti-Tuberculosis Society, a society doing excellent work in Sydney.

There seems to be a great reluctance on the part of governments to provide money for sanitaria, and, therefore, some other effective method must be found. The Provincial Health Department has made a most admirable beginning in training Public Health Nurses for county work, and it appears that along this line of work will be found the solution of our difficulties, not alone in combating tuberculosis, but other infectious diseases as well. Each county might be divided into a large number of districts with a Public Health Nurse in each. Nurses in sufficient numbers to visit each house in which tuberculosis exists several times a week, if possible, in order that as near perfect isolation can be carried out and proper and persistent supervision over each and every one in the family. Isolation and treatment in the house, instead of hospitals, of smallpox, diphtheria, scarlet fever, has been successful, and what has been done in these diseases can be done in tuberculosis. In addition the nurse should take charge of all the surroundings, seeing that everything containing infection is disinfected, removed or destroyed, and taking every precaution that is taken in a Sanitarium to prevent the spread of infection. This only leaves the care and treatment of the patient, which, generally speaking, means fresh air and food, and this can well be carried out by the Health Nurse, under the direction of the medical attendant. Not only would the nurse be a tuberculosis nurse, but a Public Health Nurse in the highest and widest sense of the term, inspecting schools, school children, and, indeed, having under the direction of the Health Officer full supervision of everything tending to improve the life or health of the child. I say child, for the child is the danger point in infection. The child is the susceptible medium through which the disease comes and spreads. The proper place to begin preventive work is with the child. Prevent contacts in children and infection will largely disappear.

The cost of such Public Health Nursing will not be any larger probably than the upkeep of a Sanitarium and while the Sanitarium only reaches a small number the nurse reaches, not only every infectious case, but every child who is exposed to infection. Perhaps, you will allow me to illustrate.

The Cape Breton Joint Expediture Commission has voted the sum of One Hundred and Twenty-five Thousand dollars to build a Sanitarium accommodating forty patients. The upkeep will be about forty thousand dollars yearly. The County of Cape Breton, under the nursing system will be divided into twelve districts in which a nurse will be stationed at a salary of one hundred and fifteen dollars per month. This means sixteen thousand five hundred and sixty per year. In the first instance, forty patients are reached at an annual cost of forty thousand dollars, while in the second instance, every man, woman and child in the county is reached for sixteen thousand five hundred and sixty, so looking at the question from the lowest and meanest outlook a saving in cash is made. But looking at it from the highest plane, namely, the cure and prevention of disease, relief of pain and suffering and all the other things that follow freedom from disease, it seems that there is no comparison, between the Sanitarium method and the Public Health Nurse method of control and prevention of disease.

With one or more Sanitaria in the Province, County Clinics, Specialists in diagnosis, public laboratory facilities within reach of medical men and a Public Health nursing system with nurses in sufficient numbers to reach every infectious case, tuberculosis and other infectious diseases would very shortly be fully under control.

The control of communicable diseases, must be solely under the direction of the Health Department and all agencies must work through it and under its direction, if overlapping, waste and imperfect work are to be avoided. Full co-operation of the medical men and the public must be obtained, or public health will become well nigh a hopeless task.

Social Background

STANDARDS OF CHILD PLACING AND SUPERVISION.

BY REV. BROTHER BARNABAS, *Director Catholic Welfare Federation for The Child Welfare Council of Toronto.*

CHILD PLACING is not a modern activity. From the beginning of Christianity down through all of the centuries it has been part of the child welfare work. During the past twenty-five years, however, it has been made the subject of special study and development, with the result that it is now recognized as one of the most important factors in any well devised plan for the welfare of dependent children. The study and development and the experience of those engaged in the work, as a specialized activity, has made it quite obvious that placing-out service, unless carried on in accordance with approved standards, will not only fail to secure good results, but will be responsible for destroying the future welfare of very many if not most of those intended to be helped. This may seem to be an extreme assertion, but its endorsement may be found in the thousands of human wrecks seeking the aid of our charities as the result of bad placing-out work.

Having specialized in placing-out work for twenty-five years and having secured free foster homes for thousands of children, this experience based upon mistakes and failures, which are the most potent guides to correct and effective service has been for me, the means of developing a set of rules for placing-out and supervision which may reasonably be offered as standards for such work.

The plan adopted for the presentation of the subject is as follows: (1) Definition of terms; (2) the child; (3) the foster parents; (4) home finding and investigation; (5) supervision; (6) discharge from supervision; (7) aftercare; (8) records.

DEFINITION OF TERMS.

Placing-out. The term "placing-out" has acquired, during the past fifteen or twenty years, a distinctive meaning which should be generally known, especially to charity workers, in order that the confusion which has resulted from its improper use may be avoided. It does not mean boarding-out, indenturing, baby-farming, the securing of employment or the mere transferring of the custody of a child from one person to another or to an institution without regard to the object of such transfer. It means placing a placeable child in a free family home for the purpose of making it a member of the family with whom it is placed.

"The term place-out . . . means the placing of a destitute child in a family, other than that of a relative within the second degree (parent, grand-parent, brother or sister) for the purpose of providing a home for such child." This definition, with the qualifying of the home as a free home, offers a complete definition of the term.

Boarding-out. The term qualifies the act of assigning a dependent child to a family home, where payment is made to the boarding-home mother for the care of the child.

Adoption. "Adoption is the legal act whereby an adult takes a minor into the relation of child and thereby acquires the right and incurs the responsibility of parent in respect to such minor."

THE CHILD.

As a general proposition, any normal healthy child is a placeable child, but aside from this subjective qualification there are many conditions which would render placing-out undesirable.

The age of placeable children may be briefly stated as follows: Boys up to and including the age of fourteen; girls up to and including the age of ten. The placing of girls over ten years of age, particularly where there are other children in the family, does not give promise of good results. The most flagrant exploitation of child labor and neglect of scholastic training occurs in the cases of girls between the ages of ten and fifteen. The experience of placing-out agencies will show that the most successful results occur in the cases of children placed at or below the age of five years.

The following extract from the resolutions adopted by the International Conference on Child Welfare in May, 1919, may be offered as a proper guide for persons of any creed or lack of creed who undertake to provide for the future welfare of children:

"The fundamental rights of childhood are normal home life, opportunities for education, recreation, vocational preparation for life, and moral, religious, and physical development in harmony with Canadian ideals and the educational and spiritual agencies by which these rights of the child are normally safeguarded."

Parent and child should not be separated because of temporary disability. If poverty, illness or even improper guardianship makes it necessary to give a child temporary care, nothing should be done to cause a definite and continuous separation, if there is hope of rehabilitating the parent and again restoring the normal relation. As the natural order provides for parental care, based upon love and affection, for the support and training of the child, it also demands a reciprocal service for the aged based upon filial love and duty. When, therefore, there is possibility of reuniting parent and child, such a child is not placeable, but should receive temporary care in a boarding home or school.

Careful investigation should be made as to the cause of death or any present probably incurable conditions, mental or physical, of the parents of the child to ascertain what, if any, inherited tendencies are likely to develop in the child. If there is any danger from this source, the child is not placeable. Such a child should be cared for in a boarding home or school until in the opinion of experts all danger from such source has disappeared, when the child should receive, if possible, the advantages of a normal home.

The placing of a child with a family for the purpose of legal adoption, without investigation as to whether all of the requirements for that procedure can be complied with, is a matter likely to create serious consequences. Courts cannot abolish by any legal process the parental rights recognized by all civilized governments, and many instances may be cited of the reversal of legal adoptions. When one or both parents of a child are living, such a child is not placeable for adoption, unless the parental consent is provided or the legal conditions favorable for such action exist.

Consent to legal adoption should depend upon a favorable probation period—of at least one year.

It is absolutely necessary before undertaking to place out a child, to secure definite information as to family history, baptism, and the physical and mental condition of such child, as lack of such information may create serious problems later on detrimental to the interests of the child and its foster parents.

No child should be placed out who is suffering from any physical or mental defect. All such children should receive the care and attention necessary to bring them up to normal standards before placement.

No child should be placed without sufficient guarantee that it will be kept at school until it reaches the age of sixteen.

For the children who are not placeable, there is the boarding home and the boarding school, either of which may be used to meet the temporary or permanent care needful for them.

THE FOSTER PARENTS.

In view of the fact that the vast majority of the families of our country consist of persons having a limited amount of wealth, an ordinary education, and little or no distinction of a social character, it would be unwise, if not futile, to set up standards for foster parents of so high a character as to limit our possibilities for success.

We should realize that most, if not all, of the children we aim to help do not come from homes where at any time unusual conditions of wealth or distinction prevailed. If we can secure homes and foster parents among the wealthy or well-to-do, we shall be pleased to have the opportunity to contribute uncommon means for future welfare to some poor children. It does not, however, necessarily follow, that children so placed have greater futures in store for them than those placed with families who have been accustomed to making personal sacrifice to maintain their positions in life; in fact, that willingness to make such personal sacrifice may contribute more to the child's welfare by securing greater personal attention, consideration, and allowance for the trials incidental to child life than could be expected from those who delegate such care and attention to a hireling.

We should aim to secure as foster parents, persons who desire a child for the child's sake. They should have an income, with a reasonable prospect of its continuance sufficient to ensure proper care and support of the child. They should not be advanced in years, as otherwise the child might lack the continuous care necessary to enable it to reach manhood under their training and supervision. They should be persons of good physical and mental health, industrious and thrifty, should possess at least average education and intelligence, and should enjoy the respect and endorsement of their pastors and neighbors as law-abiding and respectable citizens of their communities. They should be vouched for by their pastors as persons who are practical in the performance of their religious duties and as persons who will provide religious training for the child assigned to them.

The foregoing standards, except as to the financial requirements, apply also to the parent or parents of the boarding home. In this matter, however, it should be distinctly understood that the parents should not be dependent solely upon the sum received for the board of the child to enable them to supply the care and attention necessary for its support and training.

HOME FINDING AND INVESTIGATION.

Home Finding. The methods to be adopted for developing homes will vary according to the experience obtained by those engaged in the work. My experience has been that advertising is not worth the cost. "Sob stories" may develop a large number of appeals for children, but most of them will be from persons who demand impossibilities. Some publicity, however, is necessary and the interesting and appealing press items and stories will play an important part in preparing the way for other methods.

I have found that the efforts of a careful, conscientious agent can produce more satisfactory results than may be secured by any other method. In making his appeal to prospective parents, he has the opportunity to eliminate much waste of time and money needed for investigation, by selecting approved sections and neighborhoods, and desirable families. He will also learn of the local opportunities which may offer helpful assistance to the family in matters of education, religious training, recreation, companions for the child, etc. The securing of homes by such a method will, I am sure, be found the most satisfactory means employed in this phase of the work.

Investigation. Following the receipt of an application for a child, the most thorough investigation should be made concerning the applicants, their home, the members of the family, the locality of the home. This investigation to be complete should be made by an agent duly qualified for the purpose, and the report of the agent should include definite information on the following lines:

1. Character of home, location and surroundings.
2. Distance of church and school from home.
3. Personality of husband, wife, children, other members of household, probable companions, neighbors.
4. Religion and general character of parents.
5. Business, occupation or earning power.
6. Remarks of pastor or reliable neighbors.

7. Whether family ever had a child before? How treated? Present whereabouts?
8. Proposed occupation and arrangements for care of child.
9. Such additional facts as may tend to give a complete survey of all conditions affecting the character of the foster parents and their home.

SUPERVISION.

Within a month after a child has been placed it should be visited by an agent of the placing-out society with a view to learning whether the home fits the child and whether the child fits the home and is a welcome member of it. Thereafter the child should be regularly visited by the agent, not less than twice each year, and as much oftener as the necessities of the case demand. No person or society should engage in doing placing-out work unless prepared to follow this initial feature by providing adequate supervision continued for the period necessary to ensure good results. To place a child out without such supervision is a most serious and culpable neglect of the child'e welfare.

Agents when visiting the children should ascertain and make complete reports as to the child's physical and mental condition; conduct and attitude towards family; attendance and progress in school; attendance to religious duties; the kind of work, if any, performed in the home or elsewhere; if working, the compensation given, savings and bank accommodations; clothing and bodily comfort; recreation facilities and companions; and such other matters affecting the interests of the child as may be necessary for a comprehensive knowledge of the situation by the administration of the placing-out agency. They should also note any change of address and, where same occurs, give complete details of the new home and its location, and should state what changes or additions have occurred in the make-up of the faimly since the last visit, the attitude of the foster parents towards the child, their attention to their religious duties, and such other matters as may indicate whether they are continuing their qualifications as desirable foster parents for the child. Where adverse conditions occur which justify the removal of the child, the agent should transfer the child at once to such approved home as may be available or return it to the placing-out agency.

Placing-out and supervision are not and cannot be looked upon as separate pieces of work. From the time we begin our search for a free foster home, procure it, and place the child in it, whether it remains there or is transferred to another home or homes, up to the time when we may be able reasonably to declare that the child no longer needs supervision is all one continuous act, which is not completely or well done if we should discontinue supervision, except in the cases mentioned hereafter, at any time prior to the age of twenty. Proper supervision in the cases of children placed in boarding homes requires that the visits should be more frequent. Due to the fact that the relation of the child with the boarding-home mother is based primarily upon a money consideration, it is necessary that the minimum requirements for this service should be those established by well organized and equipped boarding-out agencies whose experience and methods should prove valuable guides as to the administation of a boarding-out system.

DISCHARGE FROM SUPERVISION.

As a general proposition supervision should not cease until the wards of the bureau, both boys and girls, have attained the age of twenty years.

This standard does not apply to such cases as are disposed of by adoption, as all such cases automatically leave jurisdiction upon completion of the legal formalities of adoption. Nor does it apply to such exceptional cases as may arise from time to time where it becomes desirable, because of unusual and justifiable conditions, to cease visitation in the interest of the future welfare of a child; as where the latter has been living for a number of years in an ideal home, under the most favorable conditions, believing that its foster parents are its real parents, and a strong bond of affection exists, and the necessary publicity of visitation by our agent might result in breaking up existing relations. These cases, however, will always be small in number as compared with the whole, and cannot be used as fixing the period for necessary supervision.

I have found by experience in dealing with children who are not in the homes intended for them by the natural order, (those of their parents), that the most critical period in the lives of such children lies between the ages of sixteen and twenty in the case of boys and between fourteen and twenty in the case of girls. It is during this period that the child begins definitely to manifest that spirit of youthful independence and disregard for authority which results so disastrously in some foster homes which lack the complete tempering affection of the fatherhood and motherhood of a normal home. In such cases the aid and advice of our interested agents are needful to adjust the difficulties and restore harmony. It is during this same period that the boy and girl develop an earning capacity which should be properly directed and for which due recognition should be provided by procuring for them a wage commensurate with their service and home conditions, to the end that they may have an opportunity to put something aside for the possible break in home conditions or other phase of adversity. Where such recognition is denied them they should be removed and placed in other homes where they will receive adequate recognition and compensation.

Foster homes are subject to the same fatalities that befall those of normal type. Death, sickness, adversity, or other causes may lead to the breaking up of the home, and as a result the child placed therein may be forced out into the battle for existence at at an age when a boy or girl is unable to make the struggle unaided. Again, intemperance or other adverse influences may enter the home and cause it to be so disorganized and unsafe as a shelter for the young as to make it desirable to remove a child from such conditions. It surely cannot be claimed that a boy or girl of immature age is competent to meet these adverse conditions and make proper provision, unaided, for the adjustment of them. It should be, and is our duty to anticipate such results by a continuous supervision up to a time in the life of the child when we may feel certain that we have completed the work undertaken by us in placing the child in the home of strangers.

AFTER CARE.

Complete service in placing-out work requires that when discharging a child from supervision he should be informed that the placing-out agency is not bidding him farewell, but wishes to continue as his friend and to be one indeed, should he need one at any time. Hundreds of instances could be cited of our wards who have visited us when grown to manhood and womenhood seeking advice, aid to employment, adjustment of family or other difficulties, etc., and many consoling results have followed such visits.

RECORDS.

The records of child-placing agencies should be most complete in all details. They should include a complete record of the child; including its family history, mental condition, scholastic training, baptismal certificate, etc.; all reports concerning the child and its home subsequent to placement, details as to discharge from supervision, legal adoption, and after-care. When children are legally adopted certified copies of the court orders of adoption should be produced and filed with records of such children. Records should be kept in such form as to make it possible to secure prompt and complete information concerning all children placed by the agency and of the foster parents with whom they have been placed.

Oct 1922

Canadian Tuberculosis Association

A message broadcasted by Radio during the week of August 28th, at the Canadian National Exhibition.

IT is a very great privilege for the Canadian Tuberculosis Association to be allowed to deliver a message through the courtesy of this broadcasting station. Many of the audience, dispersed in different surroundings, will be listening and wondering if there is anything new to be told about an undertaking which started in Canada more than 21 years ago. There is!

Excellent effort has been maintained during all these years by experts in the treatment of the disease, experts in the prevention of this disease, and by lay people anxious to be instructed by both groups, in order to form auxiliaries in the campaign.

Canada now has in excess of one Sanatorium bed for the treatment of Tuberculosis, for every 2,000 people. Ontario has enlargements of at least three Sanatorias, under construction now. The National Sanitarium Association, when it was completed the building, the corner-stone of which was recently laid by Lady Gage, will have in excess of 800 beds in the institution in this Province, under its direction. The Provincial Government of Quebec at the last session appropriated money for the maintenance of 1,000 beds in that Province for tuberculosis. Quebec's death rate from this disease in 1921, was 1.22 per 1,000 people. In 1920, it was 1.44, meaning a decrease of 22 deaths per 100,000 people from all forms of tuberculosis, actually amounting to over 500 people living in that province, who have to thank the anti-tuberculosis campaign for their winning chance.

Canada's total death rate for its nine provinces, from this disease, in 1921, was .876 per 1,000 people. Saskatchewan is the proud possessor of the lowest provincial death rate from tuberculosis, namely, .43 per 1,000 people, and the highest tax rate per head. Prince Edward Island has the highest provincial death rate in Canada, namely, 1.43 per 1,000 people and the lowest tax rate per head. When discussing ways and means of re-opening their Sanatorium of 75 beds recently, the speaker was informed the Provincial Government of the Island Province, would not be a party to it at the present time, that increased taxes would prove very unpopular with the Islanders. If Toronto citizens were dying of tuberculosis at the rate they were in Prince Edward Island, 500 Toronto citizens, now living, thanks to the aggressive efforts of the people of this province and city, would have died last year of this disease. Not only this, but at least 1,000 more people suffering from advanced stages of this disease, in addition to those we now have, open cases, constantly giving off infection in dangerous quantities, would be living in the midst of the people of this city.

In 1921, a study was made by the speaker of the amount of money spent by every municipality in Ontario, during the previous year, through its Board of Health. Toronto spent $1.25 per head, all other cities averaged $0.44 a head, towns over 5,000 population averaged $0.25 a head and all other municipalities were classed as rural, including townships and averaged $0.10 a head. After careful study, it was suggested that all cities and towns over 5,000 population should spend a minimum of 70c a head and rural communities should spend 25c a head. Authorities have worked out the proper basis for allotting money for expenditure through Boards of Health for different activities and the prevention of certain diseases. Their conclusions are based on scientific facts and observation. A review of their suggestions produces a total allottment of 15 per cent. to 17 per cent. of the total annual Public Health budget to activities, plant and personnel, devoted to anti-tuberculosis effort. This is exclusive of the cost of treatment of cases. I think this is fair and think it should be known and observed. This in no way anticipates that voluntary effort will be unnecessary. This simply suggests the cost of effort the Municipal Governmental authority would be justified in expending with a hope of proper return, from an investment point of view.

It is evident from what has been said above, that the municipalities on the whole are not awake to their responsibilities, in so far as seeing that the governing bodies spend enough money, properly, for Board of Health activities, to reduce the chances of your daughter and my son developing this disease and undergoing a lengthy illness just in the midst of their prime of life, costing no end of unnecessary expense and probably ending in marked debility, which they have as a handicap for life, or more unhappily still, in avoidable death.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE FOR THE MONTH OF SEPTEMBER, 1922.

COMPARATIVE TABLE.

	1922		1921	
Diseases.	Cases	Deaths	Cases	Deaths
Small-pox	19	1	48	0
Scarlet Fever	180	4	171	5
Diphtheria	180	19	294	25
Measles	62	0	14	0
Whooping Cough	196	8	150	10
Typhoid	79	7	120	31
Tuberculosis	160	111	175	115
Infantile Paralysis	55	9	17	1
Cerebro Spinal Meningitis	8	6	8	8
Influenzal Pneumonia	—	4	35	4
Primary Pneumonia	—	76	—	98

VENEREAL DISEASES.

	Sept. 1922 Cases	Sept. 1921 Cases
Syphilis	138	226
Gonorrhoea	210	166
Chancroid	3	1

The chief incident in communicable diseases reported for the Province is the increase in Infantile Paralysis for the month of September compared with the corresponding month of 1921, but a decrease of 40 per cent. in cases compared with the month of

August last, when 92 cases with 11 deaths were reported. For September the cases reported are 55, with 9 deaths, as may be seen in the comparative table. Apart from this disease the health of the Province is very satisfactory as the returns made show, a marked decrease in diphtheria and typhoid. The reduction in diphtheria cases is nearly 40 per cent. and in deaths 24 per cent. Typhoid cases are 42 less with 24 fewer deaths.

Small-pox cases are only about one-third the number reported a year ago.

Current Literature Dealing with Venereal Diseases

These abstracts are available through the courtesy of American Social Hygiene Association.

Syphilitic Backache. Warren Thompson. *American Journal of the Medical Sciences.* Vol. clxiv., No. 1, July, 1922.

Syphilis of the vertebral column, although rather a rare condition, is probably frequently overlooked. Pain is usually the chief symptom. A combination of hypertonicity with a stiff back or with a back showing areas of restricted mobility is regarded as almost certain proof of syphilis of the vertebrae. In diagnosis of syphilitic backache care must be taken to exclude all other possible factors producing backache. The Wassermann test is valuable, but it must be remembered that it is frequently negative in syphilis of the bone. A Wassermann test of the spinal fluid as well as of the blood should be made. In treating syphilis of the bone, the general principles of the treatment of syphilis should be applied. Cases should be controlled with subsequent Wassermann tests and roentgen-ray examination. Patients with extensive destruction of the spinal column demand the co-operation of the orthopedist. In concluding, the author makes the following points:

1. Backache as a chief complaint may be due to syphilitic spondylitis, and although the condition is rare, it should be considered as a possibility in every indefinite case of backache.
2. Syphilis may involve any part of the spine; the most frequent location, according to the literature, is in the cervical vertebrae.
3. The pathology is similar to syphilis of the bone elsewhere in the body. The nervous manifestations depend on the part of the vertebral column involved and the extent of the morbid process.
4. Syphilitic spondylitis presents no definite clinical picture, the diagnosis being made chiefly by: 1, the roentgen-ray; 2, evidence of syphilis elsewhere in the body; 3, the Wassermann test, and 4, the therapeutic test.

Gonorrhoea in Women from the Aspect of a Focal Infection. By Francis Ward Langstroth, *New York Medical Journal and Medical Record,* July 5, 1922.

Dr. Langstroth gives a general discussion including sociology, symptoms, diagnosis, prognosis, treatment, results of secondary infections, limitations of medical treatment, and surgical treatment. He feels that surgery offers the only promise of cure in chronic cases. In such cases, with their accompanying secondary infections, the first foci from which all the other conditions arise is the endometrium of the cervix from the external to the internal os; second, Skene's glands; and third, the Bartholin's glands. It is to these foci primarily and to the pelvic condition secondarily that surgical methods must be directed, and it is poor surgery to do pelvic operations in these cases and not remove these areas of infection. Before surgical work is attempted on gonorrhoeal patients the following conditions should be met (these do not apply to the surgical conditions that arise during the acute stage). Six months to a year should have elapsed since the last gonorrhoeal infection occurred; the typical gram negative intracellular diplococci should have disappeared from the cervical smears, and an intensive treatment of local applications of colloid silver should be carried out three times a week prior to the operation. If correct surgical work is carried out, the author feels that fully 95 per cent. of the women would be rendered not only non-infectious, but healthy, and in a majority of cases capable of procreation. The following are some of the author's conclusions:

The diagnosis is often difficult, and is frequently confused with chronic non-specific infections of the cervical mucosa.

Gonorrhoeal infection of the cervix is always followed by secondary infections, which are often the cause of severe systemic and mental disturbances.

Surgical removal of Skene's glands, Bartholin's glands, and the cervical endometrium is the only way in which the disease can be eradicated in the majority of cases.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society.

Canadian Red Cross Report.—Report of the Canadian Red Cross Society for the year 1921. Copies of this report will be sent free on application.

Nutrition of Children. A pamphlet on height and weight as an index of nutrition, prepared by the New York Nutrition Council, 1922.

Standards of Nutrition and Growth. By Dr. L. Emmet Holt, of the Child Health Organiztion of America. ("Public Health," Michigan Department of Health, May 1922, page 588.)

The District Nurse and Health Visiting. A paper read at the British Conference on Infant Welfare, by the County Medical Officer of Hampshire, England. (Public Health," S.M.O.H., Aug. 1922, page 295.)

Public Health Nursing in Canada. A survey of public health nursing in Canada, made by Miss Muriel MacKay, of the Canadian National Association of Trained Nurses. ("The Canadian Nurse," September, 1922, page 554.)

Tuberculosis Nursing. The problems of the tuberculosis nurse in rural communities. (Public Health Nurses' "Bulletin", Sept., 1922, page 65.)

Public Health Nursing in British Columbia. Public health activities in the Province of British Columbia, by Eva D. Calhoun, R.N., V.O.N., District Superintendent, Greater Vancouver Branch, Victorian Order of Nurses for Canada. Paper read at the annual convention of the British Columbia Graduate Nurses' Association. ("The Public Health Nurse," June, 1922, page 281.)

The Practical Application of the Results of Vitamine Studies. By. Emmett Holt, M.D. ("The Journal of the American Medicial Association," July 8th, 1922, page 129.)

How To Keep Well. A pamphlet on personal hygiene, recently issued by the British Red Cross Society.

The Length of the Work Day. The factors determining the length, of the work day. By Dr. R. A. Spaeth, of the School of Public Health, Johns Hopkins University. ("The Nations Health," August, 1922, page 488.)

Talks to Mothers. A series of twelve leaflets showing what mothers should do to keep healthy and happy during pregnancy, at child birth and after the baby is born. (Maternity Centre Association, New York City.)

What is Junior Red Cross? A leaflet issued by the Ontario Junior Red Cross.

HEALTH EDUCATION LEAFLETS.

The following leaflets have been issued by the National Headquarters of the Canadian Red Cross Society. Copies for distribution will be sent free upon application:—

"Care Before Birth."
"Breast Feeding."
"Weaning the Baby."
"Bottle Feeding."
"Feeding the Baby During the Second Year."
"Food for Children—Two to Six Years."
"Colds and How to Avoid Them."

News Notes

Dr. Malcolm T. MacEachern, Director-General of the Victorian Order of Nurses for Canada, addressed a public meeting at St. John, N.B., on October 3rd, on the Aims and Objects of the Order, and by means of lantern slides presented the many aspects of V.O. work.

Miss Jessie Forshaw, one of the Inspectors of the Order, is in Calgary in connection with the extension of V. O. work.

At the annual convention of the Canadian National Association of Trained Nurses, held in Edmonton, in July last, it was decided to establish a national office for the Association in Winnipeg. It is expected that a paid Executive Secretary will be appointed by the New Year. She will have charge of the secretarial work of the Association and a Bureau of Information on all types of nursing in Canada.

The nurses of Canada are collecting funds to erect a memorial to the Canadian nurses who lost their lives in the Great War. This memorial will be erected in Ottawa at an estimated cost of sixty-five thousand dollars. The nurses in the different provinces are making a great effort to obtain their proportion of this amount before the New Year.

The Victorian Order of Nurses for Canada offered 30 scholarships to graduate nurses desiring a course in public health nursing at Canadian universities. They are distributed as follows:

University of B. C., Vancouver	8
University of Toronto	10
Western University, London, Ont.	7
McGill University, Montreal, Que	5

Two appointments have been made on the nursing staff of the V. O. N. at London, Ontario, Miss Mary Shore and Miss Elsie Hurst. As the Order is responsible for the field work for the course in public health nursing at the Western University it is gratifying to know that the services of such highly qualified and competent nurses have been secured for this branch.

Mrs. J. C. Hanington, Chief Superintendent, of the V.O.N., attended the meeting of the Child Welfare Committee of the Dominion Social Service Council, September 28th, at Toronto, where she gave a verbal report on "Provision of more adequate nursing and medical service in outlying districts." She also attended the meeting of the Committee on Social Hygiene.

Book Reviews

"Obstetrical Nursing." A text-book on the Nursing Care of Expectant Mothers, the Woman in Labor, the Young Mother and her Baby. By Carolyn Conant Van Blarcom, R.N. Cloth, $3.00. Pp. 558. New York: The Macmillan Co. 1922.

This book has excellent qualities. It describes the underlying principles of Obstetrical Nursing and offers a survey of the nursing methods which are employed in various hospitals of recognized importance, and in the practice of acknowledged authorities. It is very readable and every line is worth reading. There is no padding, and very little space is wasted on minute discussions of Anatomy, Physiology and Embryology. A nurse's duty is to nurse sick people, and whether she knows the anatomy of the Levator Ani or the development of the Chorion is of little importance.

The author's style is clear, straightforward and concise, and all the way through its 500 odd pages of good type I find that everything written in this book is of an eminently practical nature. Miss Van Blarcom has a wide experience in public health matters, and this book excels in the stress that has been laid upon the value of careful supervision of the expectant mother, and the assistance which can be given to the young mother by competent nurses.

The chapters dealing with Prenatal Care and Organized Prenatal Care are splendid. It is pointed out that through the influence of maternity centre supervision and visiting nurses, the mortality amongst parturient women can be reduced by half, the number of still-births similarly reduced and likewise the number of babies dying under one month of age. The author might also have shown that Eclampsia, that most dreaded of obstetrical complications, can be eliminated by careful watchnng during the antenatal period. The detailed description of the pre and postnatal follow-up will well repay anyone who takes the time to read this book.

The chapter on the " Nurse's Duties During Labor" is thoroughly adequate. The "Care of the Baby" leaves nothing to be desired.

On the whole, this is the best book on Obstetrical Nursing that has been published, and Miss Van Blarcom is to be congratulated on such a worthy production. It will be of unusual value to nurses in training schools, to public health nurses in various capacities, and especially to that growing group of isolated rural nurses, upon whose knowledge and resourcefulness the lives of mothers and babies frequently depend.

"Home and Community Hygiene," by John Broadhurst, Ph.D. Cloth. $2.50. Pp. 428. Philadelphia: J. B. Lippincott Co. 1918.

Professor C. E. A. Winslow, of the Yale School of Medicine, writes of this book: "A text book which covered the whole field of disease prevention and health conservation in an elementary and authoritative way, has been much needed. This need Professor Broadhurst has met in the present volume. The subject has been approached throughout from the practical standpoint of the homemaker. Problems of sanitary engineering and health administration are touched upon lightly, but sufficiently for the uses of the average citizen; while those applications which are of immediate moment in the household are dwelt upon in helpful detail. This book will, therefore, be of special value to the student of household administration, and to the student of nursing. In addition to filling the need of a text book in schools of home economics and nursing, it should have a wide appeal to the general reader who desires familiarity with the principles which goven the management of the living machine and its protection against harmful environmental conditions."

"The Land of Health," by Grace T. Hallock and C. E. A. Winslow. Cloth. 90c. Pp. 208. New York and Chicago: Charles E. Merrill Co., 1922.

A series of health stories for children of from 8 to 10 years. This should make an excellent health reader for Red Cross Juniors.

Editorial

"THIS FREEDOM."

IT is not the usual thing to write an editorial on a book and after all although this editorial is inspired by a book its real subject is books—modern books in particular. More or less it has been brought forth because of Mr. Hutchinson, who not content with his achievement in "If Winter Comes" has been and gone and done it again.

This time he has done it with a vengeance and if contemporary retribution is not wrecked upon his precious head we are greatly mistaken. Mr. Hutchinson's previous effort was a well deserved success. "This Freedom" is very slightly mitigated tosh. To Mr. Hutchinson as a literary light we pay every deference but as a social reformer—alas and alack—he still has much to learn.

After reading his latest product which is an obvious piece of special pleading one can only conclude that Mr. Hutchinson's motto must be that of the Kaiser—which if we remember aright was "Kinder, Kirche and Kuchen" except that he probably adds "for life." What has not entered his head is that necessary as it is for woman to specialize in home-making it will little profit her or society in general if she stays at home to learn, that woman must be educated and intelligent if she is to be a good mother, that social reforms which affect the home are essential items of future political programmes and that women herself must bear a hand in seeing that they become effective legislative enactments. Oh, yes, there are many things that woman will do for her children and one gathers that Rosalie, Mr. Hutchinson's heroine, would have been quite capable of that sort of thing had she or rather had Mr. Hutchinson thought of it. But they didn't and the whole family came a terrific cropper because Rosalie was a business woman. That is the whole story of "This Freedom."

However, we really didn't start out to criticize Mr. Hutchinson but modern novelists in general and there is not much space left. One must be moved to criticize when one remembers that a brief ten years ago the Police Department of a great Canadian city ordered editions of "Balzac" and "de Moupassant" to be burned as offensive to public morals when to-day really dangerously immoral novels written by novelists of international reputation pass muster without question. This when we are foolish enough to almost omit social teaching from our educational curriculum and depend largely on the novelist and the movie for our instruction.

As a remedy, a school of social information for novelists might be suggested with field work, say, in the divorce court, the Venereal Disease clinic and the Insane Asylum. This being possibly impracticable public opinion will do some work for us by cutting down the sale of novels that are merely foolish. The novel with a frank sex appeal, however, a lá the school of Eleanor Glynn is in a class by itself. Little as one may approve of censorship surely some effort should be made to either have the salacious novelist hanged, drawn and quartered or his books suppressed.

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Variolae and Morbilli Four Centuries Ago

By William Renwick Riddell, LL.D., F.R.H.S., Etc.,
President, Canadian Social Hygiene Council.

ONE of the most learned and skilful of the physicians of the early part of the 16th century, Girolamo Fracastoro[1] of Verona, Italy, wrote a Latin treatise on Contagions, Contagious Diseases and their Treatment, which is a perfect mine of information concerning the theory and practice of medicine of his day.

In this paper, it is proposed to give some account of his views as to Variolae and Morbilli—these he always spoke of together[2]. He divides contagious diseases or fevers—they are all called "Febres" —into pestilential (or pestiferous) and non-pestilential—the first of the non-pestilential kind he deals with are what "those who translate the treatise of the Arabs call Variolae and Morbilli," commonly called "Varolae" and "Fersae."

Fevers of these kinds appear to attack every person (unless he prematurely dies) once in his life time, and as a rule, only once, generally in youth, seldom in adult years, very seldom in old age. The reason this is that these fevers consist in an ebullition[3] of the blood, and this ebullition is a purification from the infection contracted *in utero matris* from menstrual blood—"and so the blood is cleansed (defaecari) by a kind of separation (crisis) made by nature." It is because all carry away from the womb of the mother the menstrual infection, that nearly all suffer this contagion; and, therefore, too, it does not kill for the most part, but rather purifies (purgat). Children suffer less than adults, because if the infection is not cleansed out (expurgata) in youth, it is an indication that it is difficult of separation. Consequently "when the separation takes place at a more advanced age, it is effected with greater force and causes greater suffering, while this is less when the blood is softer (mollior) and better fitted for the removal of this infection." It happens but once because the infection has now been removed: in the rare cases in which there is a second attack, the whole of the infection had not been removed by the first.

The symptoms are simple—if the child is fevered, this kind of fever going round (vagari), you may reasonably suspect that he has been infected, but it is not certain; therefore await other indications. If he has been with an infected person, if his eyes shine, if there is constant fever, fretful (morosa) rather than acute (mordax), these are the first symptoms: then inquire if he has ever had a fever producing exanthemata, for it is seldom that it attacks the second time: then see if there is anything driven out to the skin by nature—for generally about the fourth day or a little later, there appear certain scattered reddish spots, which afterwards concrete more distinctly into pustules, sometimes more humid and like vari, sometimes drier and like the exanthemata which come out on children from heat commonly called "Suffersurae." Later on, the pustules of either kind are filled with a sort of pituita[4] and sanies, and by them, the sickness is healed, most easily in children, with more difficulty in the older—"and that is why mothers are wont to desire these fevers to come to (advenire) their children when they are of tender age."

If the blood is too pituitous, the variform pustules are white, round, somewhat full of mucor; if it is more bilious, the pustules are drier—the analogue[5] of this contagion is to "that superfluous substance in the blood which is contracted from the menstruous blood. Wherefore this infection is analogous only to those in which the purification of the blood has not been made, for which reason it does not infect everybody or every humor." To understand this, we must bear in mind the current views of physiology—there were four humors in the body and upon the proper state and combination (crasis, temperamentum) of these health depended—Sanguis (Blood); Pituita or Phlegma (Rheum, Phlegm); Chole or Cholera (Yellow Bile), and Melancholia (Black Bile). In addition to these there were in the blood, superfluous substances—perissomata the Greek physicians called them, *e.g.*, urine, tears, etc. Fracastoro with most of this period believed that another superfluity came into the blood *in ventre matris* from detained menstrual blood, that it must be got rid of (secerni, secreted) and that these diseases were merely nature's method, the exercise of *vis medicatrix naturae.* He thought that only the pituita and cholera were affected: that by their relative predominance, they determined the force of the eruption, and consequently the precise form of the disease.

The prescribed treatment follows naturally from the theory that we have to do with a "certain separation and sequestration of menstrual infection from the blood"; the practitioner is specifically told "you are to have no other intention[6] (*i.e.*, object in view), than not to impede expelling nature, but rather to help her if necessary." Some will impede by bleeding, some by purgative medicines; but if you see the fever to be such that it is causing or is about to cause these expulsions, then abstain from all medicines and let nature act by herself[7], unless perchance at the first you have observed great fulness—for in that case, it is permissible to use a purgative drug, not however unduly active (acri et molesto).

As nature is to be assisted, in the first place procure a room properly heated, cover the sick person with rugs (pannis), and let these be red[8], light diet, no wine. Carefully examine what causes are preventing expulsion whether density of flesh or crassitude of materia; nature is to be assisted by medicines which open the pores of the skin and attenuate materia.

Such are caricae[9] (figs) foeniculus (foeniculum, fennel), apium (celery or parsley) and the like, made into a decoction—some add lentils, others tragacanth. "This may be wondered at by some critical person, seeing that lentils and tragacanth have an opposite effect, for they thicken and inspissate the blood and obstruct the (pores of the) skin." But the explanation is simple enough—sometimes the ebullition of the blood is temperate, some times it is not, but either greater or less than it should be. If then it is temperate, and the humor which is heated is too crass, neither lentils nor tragacanth should be added; but it will be sufficient to administer those which attenuate or subtilize where it is greater than it should be or what is execreted is seen to be too thin; then to add lentils and tragacanth is right because in that way the ebullition is tempered, "which also should often be done in the case of sputum when it is more than is proper."

NOTES.

[1] Girolamo Fracastoro or Fracastorio, (Latinized, Hieronymus Fracastorius (1483-1555) equally accomplished as physician, mathematician, philosopher, astronomer, poet and Latinist); he invented the name "Syphilis," and first gave it to the world in 1530 in his Latin hexameter poem, "Syphilidis sive Morbi Gallici libri tres," published at Verona in that year, but written in 1521 at his country house at Cafi, 15 miles from Verona, to which he had been driven by the plague which was raging in the city.

His work on Contagions was written some years later: it appears in all editions of his works—my own copies are of the editions of 1637, Geneva, Iacobus Stoer, and of 1584, Venice, Apud Iuntas.

[2] It is said that small-pox was first specifically mentioned by Aaron Ahren of Alexandria in his Pandects of Medicine, which were translated into Arabic.

Fracastoro says: "The Greeks do not seem to have dealt with these diseases (Variolae and Morbilli) under any other name than 'Exanthemata.'"

While known in Asia from time immemorial, the first mention of small--pox in England is by Hollingshead, who erroneously gave that name to the Plague of 1377: it did not create alarm in England until after 1667, and it was about half a century later that Lady Mary Wortley Montagu introduced the Turkish practice of inoculation. Jenner first inoculated with cowpox in 1796, and published his first book on Vaccination in 1798.

[3] According to Fracastoro's theory, every contagion is caused by putrefaction, which sends off very minute and insensible particles—these if hot and viscid agglutinate into "seminaria," seed-beds or nurseries of disease.

[4] "Pituita" or "Phlegma" is one of the four "humors" of the body. See later in the text.

[5] "Analogue" means (in substance) a suitable field of action.

[6] "Intention" properly means the object or purpose of a course of treatment, *curiationis intentio*, a translation of Galen's *ho tes iaseos skopos;* but the word was often applied to the treatment itself.

In my time we had still "healing by the first intention" and "by the second intention," *i.e.*, with or without suppuration.

[7] Fracastoro is free from the obsession so long and so extensively prevalent of bleeding on all occasions; he was not wholly exempt from the idea that bleeding is often useful.

[8] Every one will remember John of Gadsden's direction to hang the sick-room of the small-pox patient in red and cover him with red rugs—the practice of keeping such a patient in a close, hot room went out within a century. John cured the son of the King of England by his method without leaving a pock-mark.

[9] Caricae were figs, generally dried, from Caria. Macrobius, in Lib. II., cap. 16, of his Saturualia, gives many kinds of figs, amongst them "Carica." On this word the well-known commentator Isaac Pontanus has the following note: "Caricarum multa apud Columellam et Palladium mentio, videnturque ita dictae a Caria regione. . . ." Columella and Palladius make frequent mention of Caricae; they seem to be so called from the region Caria. . . ." "Fennel" we call "foeniculus" in the masculine rather than the neuter gender.

Venereal Disease Situation in Canada

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THE campaign against venereal disease in Canada, which is being carried on conjointly by the Dominion and Provincial Governments, has been in operation for a period of three years. This campaign may be divided roughly into five main divisions:

1. Education.
2. Treatment.
3. Social Service.
4. Law Enforcement.
5. Statistics.

EDUCATION:

The object of education in this campaign is not so much the dissemination of knowledge of venereal disease as the development of standards of conduct and the formation of character.

A knowledge of venereal disease alone will not prevent illicit sexual intercourse nor its consequences; there must be, in addition, sound ideals which act as a basis for the control of sexual appetite.

Our campaign of education comprises general information of the prevalence and danger of venereal disease and special information appertaining thereto for groups of individuals, such as parents, young men, young women, physicians, clergymen, nurses, employers of labour, etc.

Information is disseminated by means of publications, lectures, moving pictures and the attractoscope.

PUBLICATIONS:

Publications of the Dominion Department of Health include a brochure of general information for the practitioner, a manual of diagnosis and treatment of gonorrhoea and syphilis; a manual of laboratory diagnosis and of the Wassermann reaction; pamphlets for parents, young men and women; pamphlets for sailors, captains and ship's surgeons and for those suffering from gonorrhoea and syphilis, and a pamphlet for the prevention of gonorrhoeal opthalmia in children. Through the kindness of Dr. John H. Stokes, Chief of the Section of Dermatology and Syphilology of the Mayo Clinic, the privilege was obtained of distributing his valuable work, "To-day's World Problem in Disease Prevention," to the medical profession throughout Canada. Abstracts of Current Venereal Disease Literature are distributed monthly to clinics and physicians who are interested in the subject.

Posters have been placed in public places calling attention to the dangers of venereal disease and advertising free treatment in clinics throughout the country. In addition, the provinces distribute venereal disease literature.

LECTURES:

Physicians, laymen and women, through the Dominion and Provincial Departments of Health and The National Council for Combating Venereal Disease are giving lectures to general audiences and special groups.

MOVING PICTURES:

There are two types of picture being shown; the storied film, such as "Damaged Goods," "The End of the Road," "Fit to Fight," and "How Life Begins," etc., and a purely scientific film depicting the lesions, diagnosis and treatment of gonorrhoea and syphilis. The former have been shown throughout the Dominion in every city of any size; the latter are being shown exclusively to young men throughout the Province of Quebec. In the Province of Quebec the clergy have taken an active interest in the work and have provided free halls in each of the parishes throughout the province. Announcement of the film showing is made from the pulpit and all young men of the parish of sixteen years and over invited. The attendance is invariably good. Up to the present the film has been shown to 60,000 young men. While being run off, the film in interpreted by a physician and in this way definite and clear information is given of the dangers of illicit sexual intercourse. The attractoscope, which automatically displays suitable lantern slides is used at county fairs and exhibitions. These might with advantage be placed in waiting rooms, parks and store windows. The newspapers have given very valuable aid through editorials and articles calling attention to the activities of the various bodies engaged in the work.

There has been considerable discussion as to the relative value of the storied film and the purely scientific film. The chief objection levelled at the storied film, such as "Damaged Goods, "The End of the Road," etc., are:—

1. They are commercialized,—a purely money-making proposition.
2. They are "fictional,"—a scientific fact is sandwiched in between a lot of doubtful fiction, in order to make it more readily assimilable.
3. They point a moral,—sufficient to damn any film with young people.
4. Their object palpably is to frighten,—whereas, it is only the already timid who are frightened.
5. They are extreme.—all storied films must be extreme to hold the attention.
6. They are exaggerated,—only the gravest lesions are shown.
7. Their effect is transient,—they are only one of hundreds of films which young people see year in and year out and are quickly forgotten.

Offsetting these manifest disadvantages is the very great advantage that the subject of venereal disease is brought to the attention of the entire community from one end of the country to the other and in no other way could it be so brought with equal effectiveness.

The objection to the purely scientific film which depicts the lesions, diagnosis and treatment of gonorrhoea and syphilis, are:—

1. It cannot be shown to mixed audiences.
2. No advantage gained by showing treatment and laboratory diagnosis.
3. They appeal to fear.
4. They cause venereophobia.

The advantages claimed are:—

1. They are not commercialized,—all showings are free.
2. They are purely scientific,—not exaggerated, nor faked in any way.
3. Showing treatment and laboratory examination hits the quack.
4. They act as feeders for the clinic.
5. They produce a lasting effect.

Personally, I am greatly in favour of showing this film to young men. I believe it to be productive of more good than any other form of propaganda.

The incidence of venereal disease is greatest in young men between the ages of nineteen and twenty-five years. Our propaganda to be effective must anticipate this life period. Very little is accomplished through lectures to men of twenty-five years and over, for their character and habits have long since been formed and nothing we can say or do will effect a change. Similarly lectures to adult mixed audiences, whose interest in venereal disease is purely academic, do not do much to diminish the incidence of venereal disease. Our best work is done through lectures to young men between the ages of fourteen and nineteen. The young man is the chief offender and the chief victim, and we should concentrate our efforts on him.

Parents, mothers particularly, and educators fear that lectures on the subject of venereal disease to boys of fourteen may be productive of more harm than good. In this respect we must not forget that, when judiciously discussing the subject of venereal disease with boys of fourteen, we are not opening up a new subject, and one with which they are entirely unfamiliar, but are merely clarifying and making useful a knowledge which the vast majority of boys already possess; for the majority of boys receive their first knowledge of sex between the ages of nine and eleven years. This knowledge, gained as it is in the streets, is decidedly harmful. We cannot anticipate this knowledge. We cannot lecture to boys of tender age on the subjects of illicit sexual intercourse and venereal disease as the judgment at that age is not sufficiently ripe to grasp the significance of our remarks and draw the desired conclusions. We can, however, do a great deal to offset that knowledge by our lectures before habits which are the direct result of that knowledge are formed. Similarly with young girls, our lectures on the ideals of womanhood, motherhood, deportment, the dangers of looseness, etc., must be given at an early age to be effective. Every boy and girl of sixteen years of age should have definite knowledge of the baneful effects of illicit sexual intercourse. Without that knowledge boys and girls are not equipped to face the realities of life, and unless we have given them that knowledge, we have not done our duty by them. Up to the present we have reached only very few boys and girls of the desired age. In that respect, at least, our campaign has been a failure.

Of the question of sex education in schools, very little need be said; for nothing of this nature has as yet been attempted in our schools. This subject was thoroughly threshed out at the "All American Conference on Venereal Disease," and the conclusions adopted were:—

"That education in relation to sex is but a phase of character education as a whole and cannot be accomplished at any one time. It must be a progressive process of care, guidance, instruction and example. This fact, together with the intimate relationships of the members of the family, place upon the home the chief responsibility for sex education of children during the earlier years."

"In the case of older children and adolescents, the responsibility for training and guidance in relation to sex is shared by all educational agencies having to do with young people."

Whatever our methods of educating the public—pamphlets, lectures, films—all of them unquestionably have their appointed place, and all are of value. As time goes on it will be possible to place a more exact value on each type of educational propaganda and we will be able to use each with greater effect.

Education, next to the development of character in the home, is the chief factor in the work of venereal disease prevention. Wider publicity through the pulpit and greater co-operation generally on the part of clergymen, physicians and persons in an administrative, legislative and judicial capacity are greatly needed.

TREATMENT.

The object aimed at in the provision of free treatment is twofold, viz., cure of existing cases and prevention of the occurrence of new cases. As contagion is, in the vast majority of cases, direct; it is manifest, that the greater the number of cases which are rendered non-infective, the fewer the number of new cases that will arise. Treatment is, therefore, not only beneficial to the individual but to the community at large.

Treatment to be effective must be provided for all classes of individuals. Our policy has been to offer the best means both of diagnosis and treatment available, free of charge, to every venereal patient. While it is true that the provision of free treatment means in many cases financial loss to the medical profession, it was felt that an attempt to confine the clinic to any special class of individuals would be fatal to success. Free treatment for venereal disease has been provided for in clinics and institutions, such as jails and reformatories, and through local physicians for cases remote from clinics. Beds are provided for cases requiring hospitalization. In establishing the clinics the following points were aimed at:—

1. To treat, promptly and effectively, the individual suffering from venereal disease.
2. To reach and render non-infective the greatest possible number.

3. To place the specialist in venereal disease diagnosis and treatment within the reach of every infected individual.
4. To make complete cure possible for everyone infected.
5. To diminish the spread of venereal disease in the community.
6. To act as an educational centre for the prevention of illicit sexual intercourse and the prevention of venereal disease.

There are fifty-two clinics for the free treatment of venereal disease in the Dominion stretching from coast to coast and distributed as follows:—

Nova Scotia	5
New Brunswick	8
Quebec	8
Ontario	13
Manitoba	4
Saskatchewan	8
Alberta	4
British Columbia	2

The two points of importance that were considered in locating the clinic were accessibility and privacy. These two factors were met in some cases by placing the clinic in a hospital, as part of the general clinic, and in other cases by placing it in an office or other public building. In the small town the clinics, if situated in an office or other building, quickly becomes known to the general public and is not patronized; for patients fear to be stigmatized if seen entering the building. For this reason it has been found better in small towns to place the clinic in hospitals as part of the general outdoor, or in association with other clinics, as in a health centre or provincial dispensary.

The advantages of making the venereal disease clinic part of the general clinic or operated in conjunction with other clinics are:—

1. It shows the public that venereal diseases are treated in exactly the same way as other diseases which helps to develop a proper mental attitude on the part of the general public towards those diseases.
2. Specialists in the various branches of medicine are always at hand for consultation.
3. Clinics are operated more cheaply.
4. Students have greater opportunity for studying these diseases.
5. Many patients seek treatment in the general clinic, who are unaware of the fact that they are suffering from venereal disease, and are promptly referred to the venereal disease

division; no time is, therefore, lost in bringing them under treatment.

6. The established institution with a reputation to maintain is apt to take greater pains with its patients.

The poorest type of clinic is that which is situated in a building which is used for no other purpose than a clinic. The attendance in that type of clinic is nil.

Clinics are open as a rule in the afternoon. It is only with the greatest difficulty that physicians can be persuaded to give their services in the evenings and without a doubt the evening is the time best suited to the treatment of men. In most cases it is difficult or impossible for men to get away during the afternoon. Clinics should be open afternoons for women and children and evenings for men. Unfortunately, very few of our clinics are open evenings. All clinics are equipped with laboratory apparatus sufficient for dark field and smear examinations. Other examinations, bacteriological, serological and pathological are made in provincial laboratories which have been specially equipped for the work as part of the campaign. Examinations are made free of charge in these laboratories for all physicians. The personnel of the clinic consist in most cases of a physician, social service nurse and orderly.

The success of the clinic depends in no little measure on the tactfulness and friendliness of the physician and nurse. There are, at present, being treated in our clinics roughly ten thousand patients and new patients are coming in at the rate of about one thousand a month. The majority of those attending our clinics are being treated for syphilis. Patients suffering from syphilis remain under treatment much longer than those suffering from gonorrhoea; hence the number of cases of syphilis under treatment at any given time will be much greater than the number of cases of gonorrhoea. The form of treatment and the preparations used are a matter of individual choice for the medical officer in charge of the clinic and no attempt whatsoever has been made to adopt any one particular line of treatment, for it is felt that with standardization the treatment of the patient as an individual will cease and the results will be harmful.

Treatment of prisoners in institutions, such as jails and reformatories, is carried on in all of the provinces with gratifying results. Treatment of the type of individuals who find their way to penal institutions is of the utmost importance, as it is just this class which includes criminals, vagrants and prostitutes, who are active spreaders of infection. Hospitalization is provided in all of the provinces for cases needing indoor treatment. In some provinces hospitals are obliged by law to provide accommodation for these cases. There is, as we know, considerable objection on the part of hospital authorities to the admission of cases of venereal disease; but hospital authorities should recognize the fact that these diseases are worthy of the same consideration and treatment as other diseases.

SOCIAL SERVICE.

Every clinic should have a social service nurse. Her work is of value to the patient, the clinic and the community. By her kindly interest she helps the patient to continue treatment until cured and encourages attendance of other members of the family at the clinic for examination and treatment, if necessary. She helps the clinic by keeping records, by aiding in administration and developing the efficiency of the clinic. The community, she helps through her visits to the home and the information which she disseminates there. One of the most important phases of social service work is the control of the delinquent girl who finds her way to the clinic or is under treatment in an institution. The tactful and interested nurse can and does help this type of girl in many ways. She encourages her, stimulates a renewal of self-respect, finds employment for her, and by removal to a new environment gives her an opportunity for rehabilitation.

In rural communities the district nurse does very valuable social welfare work. She visits the homes, inspects the children in the schools and through her efforts numbers of cases of venereal disease are brought into the city clinics and hospitals which otherwise would not have been treated. The social record sheet, which is kept by the nurse, is of great value in doing follow up work, tracing the original source of infection and contacts; in estimating the value of propaganda and social welfare work, and in opening up new avenues of investigation. Social service work has not been given the recognition which its importance in the campaign merits.

LAW ENFORCEMENT.

On the 9th of December, in the year 1915, the West Australian Venereal Disease Act came into being. On October 31st, 1917, New Zealand brought in a similar but more limited Act, and in the years 1918 and 1919 several provinces in Canada made legislation of a like nature.

The main features of the Acts are the same in all of the provinces. These features comprise, compulsory modified notification, compulsory examination of suspects and compulsory treatment of infected individuals, regulations prohibiting the sale of drugs and appliances for the cure of venereal disease, except on physicians' prescriptions; exclusion of infected persons from trades, right of entry; detention, quarantine, etc., regulations prohibiting infection of others, etc.

It will be seen at a glance that every effort has been made to bring under control individuals who neglect treatment and are a menace to others. There are, in addition, laws for the suppression of prostitution which have been in existence for a number of years. Latterly the "age of consent" has been raised and attempts have been made to provide legislation penalizing unmarried couples who register at hotels as man and wife. The advisability of penalizing owners of motor vehicles who use or permit their motor vehicles to be used for immoral purposes is under consideration, for it is realized to-day that the motor is replacing the house of assignation to no little extent. The success of the laws depends in great measure on the energy with which they are enforced. Money and the proper machinery, which are so essential for their enforcement are, to a great extent, lacking.

The law of compulsory modified notification—i.e., notification by number until such time as the patient fails to continue the prescribed treatment when notification by name takes place—is not being observed. There are approximately ten thousand physicians in the Dominion of Canada and these reported, for the year 1921, only 15,000 cases of venereal disease—an average of 1.5 for each physician. It is obvious that this is below the actual number of cases. However, it is quite well-known that there is widespread apathy towards reporting wherever the law of notification is in force. Reporting is not compulsory in the Province of Quebec, yet the physicians of this province are reporting their cases, voluntarily, as fully as are the physicians of the other provinces in which reporting is compulsory. In the Province of Quebec, cases attending the clinics are not reported to the Provincial Health Officer either by name or by number and the attendance at the clinics is far greater in this province than in any other. Judging from this, is it not possible that notification tends to keep people away from the clinics? In some clinics it is noted that false names are being given.

The laws of compulsory examination of suspects and compulsory treatment of infected individuals who fail to continue treatment as directed, apply chiefly to criminals, prostitutes and vagrants. These classes are constant spreaders of infection. These two laws are of real value and it is to be regretted that they are not enforced more rigorously throughout the whole of the Dominion. In only one or two provinces are they effectively enforced.

An attempt has been made in the United States to deal with venereal infection, especially as it occurs in inmates of bawdy houses, by placarding the premises in the same manner that premises are placarded for scarlet fever, smallpox, and other dangerous communicable diseases. This has not been attempted in Canada. In this regard the following resolution adopted at the "All American Conference on Venereal Diseases" will prove of interest:—

> "Whereas, since too little information is available for giving a satisfactory statement as to the results of placarding premises quarantined for syphilis and gonorrhoea; and,
>
> "Whereas, because of the nature of the diseases, their prevalance, and the widespread ignorance of their true character;
>
> "It is resolved, that the placarding of premises for the purpose of control of patients will be more harmful at this stage to a developing sympathetic public opinion than the (problematical) control of such individuals will benefit the public welfare."

The Dominion statute prohibiting the sale of drugs and appliances for the treatment of venereal disease, except on a physician's prescription, is rigorously enforced. The Department of Health, Ottawa, refuses to register any proprietary remedy for this purpose and inspectors remove from sale any found on the market. Apparently, very little effort has been made to enforce the other laws which have been enumerated. A multiplicity of laws is to be deprecated. If we succeed in enforcing compulsory treatment of prostitutes and other individuals who, through carelessness and indifference, are spreading infection, we will have accomplished much. The law of compulsory treatment of infected individuals is the one and only law that is of any real value in limiting the spread of infection. It should be more rigorously enforced. More important than laws and their enforcement is the following up of cases and continuation of treatment as long as the physician says it is necessary. Our experience shows that persuasion is a more powerful weapon than compulsion.

STATISTICS.

It is only when one begins to look for venereal disease statistics that one realizes how fragmentary and unsatisfactory they are. The findings of the Royal Commission on Venereal Disease, which were published in 1916, added nothing to our previous knowledge of the prevalence of venereal disease in civilian life. They merely confirmed estimates that had been made a quarter of a century before by venereologists of various countries. Statistics of value, which they gave us of the prevalence of venereal disease in the army and navy, are inapplicable to civilian life.

Since the inauguration of the world-wide campaign against venereal disease attempts have been made to obtain statistics of value and to accomplish this the law enforcing notification of venereal disease was enacted. After a period of three years it is found that we are no whit better off than before. The returns being made by physicians practising in Canada do not, in any measure, represent the true incidence of venereal disease. Syphilis is being reported, but gonorrhoea scarcely at all.

In the year 1921, there were admitted to venereal disease clinics throughout the Dominion 4,914 cases of syphilis, and during the same period there were reported by physicians 6,997 cases, making a total of 11,911 cases of syphilis, or 1 in 714 of the population. The following figures, which are practically classical in that they so closely conform to estimates, are given by Desloges and Ranger for the Province of Quebec:—

"Among the statistics of cases reported 80 per cent. of the total were men and 20 per cent. women. Most became infected between the ages of 21 and 25 diminishing off from that figure both ways. Of these cases 64 per cent. are unmarried, 32 per cent. married, and 4 per cent. widowed. Commercialized prostitution accounts for 34 per cent. and clandestine 36 per cent. Congenital cases are only one per cent. Disease contracted under the influence of alcohol amounts to 25 per cent. of the whole."

There are no figures of any real value of the prevalence of syphilis in civilian life. Drawing conclusions from the draft figures in the American army, 5.6 per cent. would be an outside figure for the ages 21 to 31. The Life Extension institute found less than one per cent. of syphilis in industry and about 3 per cent. in a mixed population. The Mayo clinic found 4.6 per cent. of syphilis in mixed classes. The Royal Commission gave 10 per cent. for the British Isles. Mortality reports of syphilis are just as difficult to obtain as are morbidity reports, owing to the fact that physicians through kindly motives do not give syphilis as the cause of death.

The total number of cases of venereal disease reported in Canada during the year 1921 was 25,089. This represents 1 in 330 of the population. This is below the usual estimates. Laws enforcing reporting have so far been unsuccessful. There remains only the development of interest and sympathy on the part of physicians towards the work that offers any hope of improvement for the future.

SUMMARY.

1. The clinic is the strongest arm of the campaign.
2. Follow up work, which is so essential, is not done as thoroughly as it might be.
3. The law of compulsory treatment of infected individuals, who fail to continue treatment, is of value.
4. The law of compulsory notification is a failure and may even tend to keep people away from the clinics.
5. The statistics obtained so far are of relative value only.
6. The campaign in its entirety has been productive of much good.

REFERENCES.

Report of "All America Conference on Venereal Diseases," New Legislation for the Control of Venereal Diseases, Clarke. International Journal of Public Health, Sept., 1920. Syphilis and Public Health, Vedder. The Prevention of Venereal Disease, May. The Nation's Health, Sir Malcom Morris.

The Place of the Sanitary Engineer in Public Health

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Read before the annual meeting of the Canadian Public Health Association, St. John, N.B., June, 1922.

THERE are two fundamental aspects to most problems in public health. (1.) The medical aspect having to do with the individual. (2) The social or engineering aspect having to do with the environment. Teachers of the "new public health," as it is popularly styled endeavor, and correctly so, to direct your effort and mine against the forces of the enemy and they suggest that the enemy is not the hydra-headed monster our grandfathers painted filth, dirt and disease, which even in our own day and generation is unfortunately too often seen both in industrial and rural areas, but the more dangerous and terrible creatures, "germs of disease" in our biological environment.

These germs of disease when successful, are referred to as infections and there are many modes and sources of infections. Too commonly public and private water supplies, milk supplies and bathing in polluted water is the loophole through which the attacking host carry to success their campaign against their human biological associates. In warfare the forces are under direction of the Commander-in-Chief, but the Commander-in-Chief cannot wage war successfully without H.Q. and trained officers and he must in addition have his technical staff.

In public health the place of the Sanitary Engineer is on the technical staff, and he should be both an engineer of recognized standing in the engineering profession and experienced in public health and sanitation as well. The experiment has been tried, but without success of attempting to direct engineering affairs through officers, who are not engineers, but who are trained Sanitary Inspectors. The officials may hold a medical degree, or they may not. The reason of the lack of success is that even to-day there is a definite lack of technical knowledge of how to accomplish the desired end amongst the persons in professional life and in municipal offices, who are the recipients of the instructions or reports emanating from officials having to do with the supervision of the public health, or the administering of Public Health Acts.

It is not sufficient to tell a municipality that the water supply is bad or that the chlorination is ineffective. The efficient Board must be in a position to send a trained worker to show the municipal officials how the matter can be remedied. The better the Sanitary Engineer, the better the advice and the cheaper the cost of bringing about the desired changes.

There has been and no doubt will always be a certain amount of friction between the State and Provincial Sanitary Engineers and the Municipal and Consulting Engineers affected by Public Health Acts. So that the State official must exercise a great deal of tact in his dealing with his professional brethren. The writer feels that public health administration has no place for the many codes of ethics which surround the practice of the professions, both of Medicine and Engineering. The campaign takes no account of those who falter or who are found wanting. The destruction of the enemy forces is the main issue and must always remain the object if success is to be assured. Again, it is true that the better the official, the less likelihood is there of destructive criticism from individuals affected by orders or instructions issued in the interest of the public health. Only too frequently, schemes are submitted to State and Provincial Boards, which upon analysis are found wanting, and in a true sense it is up to the Board to suggest a solution. If a Board rejects a scheme on account of some defect capable of remedy instead of effecting a compromise on the basis of the minimum requirement, enthusiasm is dampened and municipal initiative is destroyed. Tact and diplomacy frequently conserve energy and advantage for the cause.

The need of Sanitary Engineers in State and Provincial health organizations must be accepted without question when it is realized that approximately 8 per cent. of the general expenses of the larger urban municipalities is for sanitation and cleanliness as against 2 per cent. under the caption, "Conservation of Health." In Ontario, the schemes presented to the Board with respect to water supply, sewerage, and sewage disposal were estimated to cost over seven and a quarter million dollars in 1921.

The question is frequently advanced as to whether the enterprises included under the caption, "Sanitation and Cleanliness,"—sewers and sewage disposal, refuse collection and disposal, public convenience stations and other sanitation—have a place in the "New Public Health." Without attempting an answer to this question, it may be stated that whether or no such enterprises are best administered through health departments, they are necessary adjuncts of modern congestion of population in urban centres. These enterprises, together with those relating to the distribution and purification of municipal water supplies, the inspection of plumbing, and the distribution and handling of milk, appear to be the distinct province of the Engineering profession, rather than that of the practice of Medicine.

In the early organization of State and Provincial Boards of Health, Sanitary Engineers, in a few of the States to which they were appointed, took on in addition to the purely engineering and administrative work, a great deal of the epidemiological service directly associated with enteric fever outbreaks and this division more or less continues to this day in States like New York and Ohio, where the State Sanitary Engineer is not only a competent engineer, but in addition a trained epidemiologist with respect to outbreaks of enteric fever.

It appears to the writer that the association of the Engineering departments with the department of Epidemiology has been unfortunate in the past for two reasons:—

The first is that officials without a medical education were seldom in a position to give an expert opinion with respect to the onset of disease, and are rather prone to attribute the cause to the most plausible source without undertaking detailed pathological investigations and bacteriological studies.

This, I take it, is not within the province of the Sanitary Engineer, although as already has been stated in many States and for a considerable period much of this work has been relegated to the Sanitary Engineering Department, in view of the frequent association of the outbreaks with a polluted water supply.

Secondly, epidemiology, which deals with the control of outbreaks, as the name implies, should not be the consideration of the Engineering Department, since their chief concern and effort should be directed to forestalling outbreaks,—putting it another way,—the work of the Engineering Department should be not in locking the stable door after the horse is stolen, but in addressing itself to the discovery of loop-holes through which an invasion might obtain access and upset an environment, which has been built up coincident with the tremendous concentration of population under urban conditions.

I think that the chief business of the Engineer is to modify the condition of environment, in contradistinction to the aim of Medicine to adapt an individual to an uncontrollable environment. If this is accepted as the proper contribution of Sanitary Engineers, then in addition to the activities now associated with the distribution and protection of water supplies and the collection and disposal of Municipal wastes, including sewerage, there should be added the supervision of those great public utilities, which especially are now part of the environment of the individual. I refer especially to such things as the milk supplies of our municipalities, the drinking water supplies of common carriers and the prevention of nuisances such as smoke and odours, associated with the industrial life of our urban communities.

There is a question in the writer's mind as to whether or not the Department of Statistics might not be well relegated to the Sanitary Engineering service, and made a part of that division. The task of measuring up has been conceded to be an engineering matter, and it does not appear that there is anything like enough advantage taken, of even the statistics that do exist with respect to mortality and morbidity, in our various urban and rural centres. It has always appealed to the writer that if such figures were carefully analyzed and the information distributed to those groups of the population most interested that we might direct enthusiasm, which is quite evident in matters related to public health, along channels which would show a net return from the enterprise.

The burden of taxation, so much increased by reason of obligations contracted during the war, is beginning to have a distinct effect upon appropriations available, even for public health activities, and it appears that the more complete our information as to the essential thing needed in a community, the better the Department is placed with reference to the distribution of such monies as are available. There has been, in the writer's opinion, too great a tendency for one municipality to copy the enterprise "holus-bolus" of another centre without definite study as to the thing needful in that particular centre. Sometimes a great many things are needed, and there is no difficulty in arriving at an agreement to that effect, at the same time it will be admitted that many of the things attempted are not capable of solution, from our present knowledge, and we would be well advised to limit our effort to things capable of attainment until such time as research has revealed the proper mode of attack with reference to other activities.

In summing up, therefore, I would suggest that the place of the Sanitary Engineer in Public Health is to regulate as far as information and legislation will permit, the environment of the individual, especially as that environment may be affected by municipal water supplies, the collection and disposal of wastes, the protection of milk supplies, and the enforcement of sanitary regulations with respect to the production and pasteurization of milk; and the conduct of surveys for the determination of the exact situation with respect to any given municipality as to its use of public utilities such as water supply and sewerage; the determination, also, of the presence of undesirable features, such as private wells in built-up sections and the absence of a sewer connection, associated as it must be with other types of conveniences—closets, privy vaults and the like, and to generally co-relate information as to public monies spent on sanitation and cleanliness in municipalities, with that spent for other civic enterprises—it is a very small percentage, by the way—and, finally, to co-operate with, or absorb the statistical departments of the health bureaus with the idea of making the information now lost in the voluminous vital statistic returns, available for the information and use of the various social agencies which are assisting in the great problem of public health.

The fact that Sanitary Engineering as we now understand it has had a long association with the activities of Provincial and State Health bodies, usually under the direction of a Chief Officer, whose qualification in the practice of medicine was a statutory requirement, has been to the mutual advantage of both professions, and undoubtedly the "New Public Health" is an offspring of that union. The present cry for a severance of certain of these activities from Health Programmes appears to the writer to arise more from the ever-increasing pressure of work, foreign to medicine, now supervised by Medical Officers of Health, than to any desire of the public or the professions for a severance of these old associations.

A study of the Public Health enactments of the last century—and it is only within the latter half of that period that we have witnessed an organized advance—leads one to conclude that accomplishments of the past are coincident with improvements in housing, living conditions, including diet, industrial hygiene and the lessening of the congestion in one and two-roomed tenements.

The influence of these must not be too lightly dismissed before abandoning fields, the fertility of which in the past yielded such returns as to place the modern movement in its enviable position.

Do not make a mistake and conclude that the writer is not in complete accord with the principle of the "New Public Health." He with many others feels that the whole movement has been marking time too long, and that the time is ripe for exploration of new fields, and that greater advantage might be taken of the scientific information and experimental demonstration at the disposal of the public and the medical profession alike. Whether or not the "New Public Health" can be ushered in by the existing Public Health organizations, staffed largely by officers, whose main qualifications are the right to practice medicine, is a debatable question.

The suggestion has been advanced and something has been written in recent years of the advisability of opening up the administration of public health departments to professions other than that of Medicine. Whether the future will see the Engineer amongst these groups or not, I do not think is of first importance. All professions have contributed great administrators to the world. In public health there is a need for great administrators and, I think, possibly it goes without very much argument that public health organizations should have administrators whether they obtain them from the Medical profession or from any other. It is to be hoped that there will be no striving for place in the "New Public Health." It would hamper the progress of the great movement, which this conference represents.

Co-operation is the watch-word of the day, and it seems to the writer that there is no real reason why jealousies should interfere materially with the progress of public health. There is no reason, nor is there an excuse why in the light of our modern knowledge of the "New Public Health, contributed from so many sources—medicine, pathology, bacteriology, chemistry, biology, and engineering—progress should be arrested by bickering between professions for preferment.

The School Child and Nutrition

BY HELEN R. Y. REID, B.A., LL.D.

Read before the Child Welfare Conference, Toronto, September, 1922.

1. Is Malnutrition very prevalent among school children to-day?

Dr. Mitchel's[1] experiment in 1918 with New York school children afforded the conclusion that 16.9 per cent. of the United States school population were 7 per cent. or more under weight, 168,000 out of New York's million school children being thus affected. Dr. Wood[2] of Columbia University records 20 per cent. as malnourished after a study of 22 million American children in 1918. A later Wood study of half a million city and country children estimated 16.6 per cent rural and 7.6 per cent. city children as malnourished. Dr. R. P. Emerson[3] of Boston claims that one-third of American children of school and pre-school age require treatment for malnutrition. (This estimate approximates fairly with the findings of the Montreal Patriotic Fund Clinic in its first 1,000 children when 299 children were found 7 per cent. under weight for their height (29.9 per cent.) The second 1,000 children showed 260 malnourished children (26.0 per cent.), and the third 1,000 showed 204 (20.4 per cent.)

Even more interesting are two studies made by Dr. Josephine Baker[4] in 1909 and 1921 of 356,292 children and 139,770 respectively, which showed that in 1909 about 3.8 per cent. of the children had defective nutrition at the 8 years and under period. This percentage increased until the 8-10 year period was reached, then decreased until the 14 years and over group, when 2.3 per cent. of the children examined were found to be malnourished. In the 1921 study the percentage of malnutrition was approximately 17.0 per cent. at 8 years and under. The incidence increased very rapidly until it reached 21.0 per cent. at the 10-12 year group, then fell off with marked suddenness so that the children in the 14 years and over group showed approximately 15.0 per cent of malnutrition.

A third 1921 study of 243,416 New York school children reported by Dr. Sobel[5] gave a percentage of 17.5 per cent. malnourished, and contrasted this with 19.2 per cent. in 1,061 children of pre-school age examined just before entering school.

2. Why is there such Variation in the Percentages quoted?

This depends on several factors, among which are included the following: The different standards used; the varying personal interpretation by examining physicians, nurses and statisticians; the sex, age and nationality of children in the groups examined, as well as their geographical distribution and the years in which examinations were made.

3. How are Nutrition Standards Established?

[6]Standards of the physical development of children for the purpose of determining the state of nutrition represent for the most part averages of measurements made by different observers in widely separated communities without reference to racial stock or group distribution. At times these groups include all children regardless of their physical or mental status, also handicapped children as far as these are attending school. These standards also sometimes include records of physical defects and mental status. The most frequently used are those on standing weight and height.

It is very generally recognized, however, that attention should be given not only to height and weight standards, but to the presence of other factors and defects, to poor health habits, home conditions, lack of fresh air and rest and other predisposing causes and symptoms. (Dunfermline Scale.)[7]

Dr. Thos. B. Wood[2] (United States Bureau of Education and Columbia University), established a standard for malnourishment if a child is 10 per cent. below the average weight established for its age and height. Dr. Emerson[3] makes this 7 per cent., and says "to be habitually 7 per cent. under weight is to be retarded at least one year in development." The Illinois Child Labor Law of July, 1917, tentatively provided standards for the 14-year-old child of 80 pounds and 55 inches. This was later lowered to a minimum of 75 pounds and 55 inches. (See Child Welfare Standards of Childrens' Bureau.)

4. How are adequate Food allowances estimated?

In establishing methods for determining adequate food allowances for children of different ages, provision is made for the proper amount of protein, fats, mineral elements, vitamines, and the correct number of calories. Types of food are usually suggested for the amount required for adequate nutrition. The kinds of vegetable, cereal, fruit, fat or meat, will vary according to the custom of any given nationality.

Other nutritional standards and food allowances for children were used for mass feeding in Central Europe during the food block-ade and afterwards, when the tragic folly of the war prevented food reaching the enemy's children and later sent in supplies at great cost of labour and money to try and bring back from the grave the little ones at first abandoned to their fate. These continental standards for mass feeding are associated with the names of Drs. Clemens Pirquet[8] of Vienna, and Rohrer of Germany, whose systems of nutrition have proved exceedingly useful. These were based on Rubner's theory of the proportion existing between energy and expenditure (and therefore food intake) and the external surface of the body. A formula was obtained for the relations between weight, sitting height, and absorbing intestinal surface which was used in what Dr. Pirquet called his Pelidisi system. The essentials of this were three, viz.,—relation to height and weight, statement of the values of the various foodstuffs in terms of milk, and recognition of the bodily demand for protein and vitamines. The Rohrer formula used in Germany was finally abandoned as unsatisfactory. To nutrition workers who think in terms of calories not Nems, and of individual treatment not of feeding thousands and millions, the logarithmic calculations involved in these systems seem somewhat terrifying!

5. Is Malnutrition a fundamental handicap? Yes, because "it affects height and weight, interferes with general development, delays puberty, lowers vitality, makes every child susceptible to infection with less chance of recovery and more chance of relapse. It is likely to precede tuberculosis, to produce rickets, and it retards mental development as two or three times more cases of malnutrition are found in retarded mental cases than in normal mental cases." A mass illustration is available in a 1921 official report on Effects of Underfeeding on the Health of German Children: "In some of the industrial cities 50 per cent., and in some of the largest cities 70 per cent. of the school children are seriously undernourished. The physical condition of the children now entering school is considerably worse than that of the entering classes of previous years. The height of the children of almost all age groups is below the average height of children of the same groups in 1913-14, while in some of the large cities the average weight of the children is five pounds less than the figures for those years. The capacity for study is decreased, the early mental fatigue and weakness of memory are evident. Tuberculosis is much increased, and it was found that 40 per cent. of the children between 6 and 15 years of age in the larger cities show tubercular infection. Rickets and scurvy are widely prevalent and in some places their incidence is even increasing."

6. Can Malnutrition be best attacked in the home or in the school, or in both?

Malnutrition classes are easily formed from the school or institutional groups. School lunches, open air classes, organized athletics and recreation give definite returns in health and can be instituted in schools, thereby reaching large numbers of children provided an educated public agrees to vote sufficient money for these legitimate and praiseworthy objects.

B. B. Burritt of the N. Y. A. I. C. P., maintains, however, that the chief emphasis must be placed on the Home in any campaign that is to be really preventive in character, for the interesting reason that nutrition work has to be done with the group of children who are too young for the class method of treatment. This conclusion is confirmed by Dr. Josephine Baker and Dr. Sobel, whose findings and comparisons have already been quoted. Dr. Baker's summing up of her study on the need for physical examinations includes the following illuminating statements: "A logical deduction that might be drawn from this study is that great emphasis should be placed hereafter upon the pre-school age period as the time when physical defects (including malnutrition) should be prevented or corrected."

Following this pre-school trail we may justifiably quote Dr. Julius Levy, of the New Jersey State Board of Health, who says "that malnutrition of the child of pre-school age is largely the result of improper care and feeding in the first year of life. Secondly, that it is the result of unnecessary and improperly managed contagious diseases, and thirdly that it requires for its cure more the application of the rules of hygiene, nutrition and discipline and training than it does the administration of drugs and medicines." And so we hark back to the protection of maternal and infant life if we are to have well-nourished school children. The home as well as the school needs Education in Health, and the parents as well as the children must be reached by the same thorough and enthusiastic influences which are now so generally directed to the child in school. We must realize again the oneness of life, the influences of heredity and environment and the necessity of "grappling with the whole child situation." For our failure to realize this we are still paying the price in the juvenile courts, in our orphan asylums and poorhouses, in our hospitals, in the loss of our economic efficiency and in our malnourished school children."

[1] "Malnutrition and Health Education." David Mitchell, M.D.

[2] "Health Essentials for Rural School Children." Thos. D. Wood, M.D.

[3] "A Group Study of the Results of One Hundred Physical and Mental Examinations of so-called Well Children." Wm. R. P. Emerson, M.D.

[4] "School Health Supervision . . ." S. Josephine Baker, M.D., New York City Monthly Health Bulletin for June, 1922.

[5] "Examination of Pre-School Age Children." American Red Cross, New York Chapter.

[6] "Heights and Weights of School Children." Public Health Service, U.S.A., Report No. 20, 19th May, 1922.

[7] "Monthly Bulletin, September, 1922, New York City Department of Health. Dr. Josephine Baker, New York City Monthly Health Bulletin for June, 1922.

[8] "Recent Applications of the Principles of Nutrition." Drs. Violle and Merrill, American Journal of Public Health, July, 1922.

[9] "The Psychology of Childhood." Norsworthy and Whitney.

[10] "The Undernourished Child of Pre-School Age." Julius Levy, M.D.

Agglutination Phenomena with Diphtheria Antitoxin

By P. J. Moloney and L. O. Hanna.

(From the Research Division, Connaught Antitoxin Laboratories, University of Toronto, Toronto, Canada.)

In search for an in vitro test for diphtheria antitoxin the following observation was made: (*a*) When an emulsion of the diphtheria bacillus, Park 8, is mixed with diphtheria antitoxin, allowed to stand at 37° C. for 1 hour, centrifuged, washed with saline and re-suspended, it is no longer agglutinated by diphtheria-agglutinating serum. (*b*) The organisms sensitized in this way are inagglutinable by acid agglutination.

In this test for the inhibition of acid agglutination the cells are suspended in a buffer solution which gives a maximum agglutination with unsensitized cells. The point of maximum agglutination for acids varies somewhat depending on the culture and the buffer mixture, but for phthalate mixtures (Clark and Lubs) diluted 1-1 with distilled water is about Ph 4.2 for a three or four-day broth culture of the Park 8 strain.

To determine the specificity of the test for diphtheria antitoxin, experiments were carried out along four different lines.

1. The following sera were used in place of diphtheria antitoxin and the test carried through: normal human serum, positive T.B. human serum, normal guinea pig, concentrated tetanus antitoxin, fresh antitoxic serum, normal horse, normal sheep, normal rabbit.

In the above experiment there was inhibition of agglutination when the cells had been sensitized with antitoxic serum and with tetanus antitoxin; and when the other sera had been used there was agglutination. A guinea-pig test with the tetanus antitoxin showed that it contained diphtheria antitoxin, and it was subsequently dis-

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covered that this tetanus antitoxin was from a horse which had previously been used for the production of diphtheria antitoxin.

When diphtheria bacilli are sensitized with diphtheria agglutinating serum instead of antitoxin there is inhibition of agglutination when the cells are subsequently subjected to serum agglutination but acid agglutination is not inhibited.

A possibility which was kept in mind was that the effect with antitoxin might be due to the presence of agglutinoids in antitoxic serum. In an attempt to check this, agglutinating serum diluted (1-10) was heated 75-80° C. for 1 hour and subsequently used in the test; both with acid and serum agglutination there was no inhibition. One might conclude from this experiment that the agglutinins were destroyed by the high temperature and that no agglutinoids were produced. Up to the present attempts to produce agglutinoids from agglutinins have not been successful.

2. An emlusion of diphtheria organisms incubated with a mixture of antitoxic serum and diphtheria toxin in suitable quantities is subsequently agglutinated both by acid and by diphtheria-agglutinating serum, whereas if the toxin is replaced by an equal volume of broth the cells are not agglutinated. The conditions for this experiment are limited by two factors: there must be sufficient antitoxic serum to sensitize the cells, and an excess of toxin.

Diphtheria organisms sensitized with antitoxin are rendered agglutinable by mixing with diphtheria toxin, centrifuging, washing with saline and re-suspending.

Diphtheria toxin has this same neutralizing effect on diphtheria-agglutinating serum. From this one might conclude that diphtheria toxin contains agglutinogens besides true toxin.

3. In an attempt to apply the test quantitatively two general methods were used: Organisms were sensitized with progressive dilutions of antitoxic sera and the limit of inhibition read as the end point; and mixtures of serum and toxin after standing 1 hour at room temperature were added to sensitized cells directly, and after dialyzing—it had been found that toxin dialyzes through parchment paper—and the dialysate mixed with sensitized cells which were subsequently tested for agglutinability.

Neither method gave results which were uniformly consistent with guinea-pig experiments. Using the first method some results were obtained which were parallel to the guinea-pig tests, in other cases the results were reversed, *i.e.,* in some cases two sera which by Ehrlich's method gave, *e.g.,* 300 A.U. and 150 A.U. per c.s. respectively showed by this test that the second contained more antitoxin than the first.

In this connection it is well to recall that according to the work of Roux,[1] Danysz,[1] Momont[1] and Cruveilhier,[2] the results obtained with antitoxic sera by Ehrlich's method do not always parallel those obtained by the French method—a method which has at least the merit that its results are based on animal experiments, the conditions of which correspond in a measure to those which obtain in the actual treatment of the disease. These workers claim that in some cases the results are not only not parallel but may even be the reverse of each other. On the other hand according to the work of Marx[3] the two methods give parallel results. No comparison between the test described here and the French method has yet been carried out.

4. It would be of interest to know whether washed diphtheria organisms do actually take up antitoxin. A carefully controlled experiment to test this was carried out. Organisms which had been washed several times with saline were mixed with a known amount of antitoxin, allowed to stand for 1 hour at room temperature, centrifuged and the supernatant liquid drawn off. A guinea-pig test with an appropriate amount of toxin showed a fall in antitoxic content of the mixture. The difficulty with this experiment is that it is not known when the cells are sufficiently washed. It is proposed to repeat this experiment in the following way: Wash diphtheria cells several times and then wash again batches of these cells and test the first and progressively washed lots to see whether a point is reached where the drop in antitoxin reaches a constant.

SUMMARY.

Both acid and serum agglutination of Park 8 strain of *B. diphtheriae* are inhibited when the organisms are first sensitized with diphtheria antitoxin; when diphtheria-agglutinating serum is used instead of antitoxin, serum agglutination is inhibited but not acid agglutination.

This inhibition phenomenon with antitoxin is specific, at least for the Park 8 strain.

It is not definitely established whether it is a test for antitoxin;

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[1] Abstract in the "Bacteriology of Diphtheria"; Nuttall, Graham, Smith, 1913. 525.

[2] Cruveilhier, *Ann. Inst. Pasteur*, xix. 1905, 249.

[3] Marx. *Zeit. f. Hygiene*, 1901, xxxviii. 372.

it is possible that the phenomenon may be due to agglutinoids, or to a diphtheria antibody not noted heretofore.

Nicolle, Debains and Césari[4] have described a qualitative test for toxin and antitoxin which is based on a precipitin reaction. It is evident from the results above that while the test may be specific for the diphtheria bacillus and for the other organisms used by them, it should be subjected to further investigation before it can be accepted as specific for toxin and antitoxin as defined by Ehrlich's quinea-pig test.

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[4] Nicolle, Debains and Césari, *Comp. rend.*, 1919, clxix, 1433.

T. B. Sera—All will not show agglutination, but all will show the above phenomenon.

Canadian Social Hygiene Council

The following report covering activities for the year has just been received from the British Columbia Social Hygiene Council:

1. Some hundred meetings have been addressed in Victoria and the Island.

2. In propaganda work more than 80,000 pamphlets have been distributed on the Island, in the Queen Charlotte Islands and on the mainland.

3. Rather more than 600 letters have been sent, largely dealing with enquiries.

4. The work was presented to the B. C. Municipalities at their meeting in Kamloops on October 5th last, and the matter was incorporated in their minutes. Kamloops itself was also worked.

5. Meetings have been addressed at Vernon, Kelowna, Rutland, Nelson and Penticton, where the interest is still growing.

6. Prince Rupert has signified their willingness to co-operate and arrangements are in train for organizing a branch there.

7. Centres have been formed at Duncan and Nanaimo.

8. Study groups have been formed among the women, in order that a thorough knowledge of the problem may be spread among the various women's societies.

9. The Gyro Club of Victoria acting under the Council has undertaken to carry on the work among the younger men.

10. The Anglican, Methodist and Presbyterian Churches have agreed to aggressively take up the work, and have committees at work.

11. Arrangements have been made for a weekly article, dealing with Social Hygiene, to appear in the newspapers.

12. In Victoria 461 public placards have been placed advertising the Clinic, etc., and some 300 also in Vancouver. In addition, in the latter city, boxes containing literature for free distribution have been placed, and thousands of pamphlets are being taken.

13. Five pamphlets have been put forth by the Council, and others are in preparation.

14. In the Kootenay District committees are now being formed at Kelso, Fernie, Cranbrook, Creston, Nelson, and Trail, and some other smaller points.

Canadian Tuberculosis Association

BROADCASTED BY RADIO DURING THE WEEK OF SEPTEMBER 4TH AT THE CANADIAN NATIONAL EXHIBITION, TORONTO.

THOSE who are listening in to this message, may be unaware as to what exactly is the function of the Canadian Tuberculosis Association. It is a voulntary organization, whose constitution defines its objects as follows:

1. By enlisting the co-operation of the people generally with the medical profession, and by increasing the interest in means of lessening the ravages of the disease.
2. By investigation into the prevalence of tuberculosis in Canada, and by collecting and publishing useful information.
3. By advocating the enactment of appropriate laws for the prevention of the disease.
4. By co-operating with governments and other organizations in measures adopted for the prevention of the disease.
5. By promoting the organization and work of the Provincial Associations and their affiliation with the Canadian Association.
6. By encouraging all concerned to provide suitable accommodation for consumptives, in hospitals, sanatoria, and otherwise.
7. By such other methods as the Association may from time to time adopt.

They are broad, far reaching, and yet limited. It would seem after the lapse of years since they were first adopted, they have only enriched themselves in their adaptibility to changing times, facts, and requirements.

The three principal items of programme adopted within the present year, are anticipated in the first object named. With the hope of finding cases everywhere earlier in their state of development, we have planned to assist in the establishment of diagnostic clinics within the reach of all, to facilitate all the public submitting themselves to examination. Further, we have included in our scheme the provision of the services of those most expert in diagnosing chest cases, namely, the visitation to these clinics, of the salaried medical staff of the sanatoria, to co-operate with the local physicians and assist them without cost to themselves or their patients, to receive expert opinion.

It was estimated this spring from information gathered by this office that considerably over a hundred municipalities in Canada had provided themselves with Public Health Nurses, part of whose work was in the interests of the anti-tuberculosis campaign. During the enquiries we were able to learn of only 29 or 30 of these same centres which had diagnostic chest clinics operating. Recently we made a further inquiry from cities in Canada, scattered from coast to coast, and found that 22 out of 29 furnishing information, possessed public laboratory facilities doing examinations of sputa. They report 8,650 examinations with 1,508 positive findings. In only one case, that of the city of Montreal, does its positive findings exceed that of the negative results. Twenty cities report having Public Health Nurses doing tuberculosis work and 14 of them report a total of 35,355 visits, presumably pertaining to tuberculosis work. Thirteen of the cities report having chest diagnostic clinics, and eleven of them give a total of 40,285 visits for consultation purposes. Seven cities report 8,856 individuals as being on the attendance register of their clinics for the year.

It is evident from these figures that much remains to be inaugurated, and very much increased effort is desired to make more efficient the existing agencies. A more perfect understanding of the benefits to be derived should be brought home to the physician and the people. Doubtful and suggestive cases should be referred early for submission to all the scientific methods and facilities available to establish that tuberculosis probably does not exist or that it does exist in an early form which will easily subside under proper care, will not be infective to others and will not progress far enough before healing, to leave a permanent debilitating handicap on the individual's efforts to follow his ordinary or desired pursuits in life.

The presence of disease in the whole Province does not appeal to the interests of some people. It is necessary for them to be informed that there are at least two children attending the same school as their Georgie, who have tuberculosis in a sufficiently advanced state, to require immediate institutional treatment. This was found to be the case in every 200 children, presumably well, and attending school, in Saskatchewan, the province which has the least tuberculosis, according to its death rate, of all the provinces of Canada. We need funds and personnel to survey the children of at least one county population in each province.

It is the duty of all of us to join our intelligent friends and insist upon a stock taking. The governing bodies will do exactly what most of the people favor, if they know their action will be approved.

More money spent, and more activities instituted, which are known to be productive of curtailment of the disease, would assure the increased happiness we desire.

Social Background

The Church as a Social Agency

THE CHURCH AS AN ORGANIZER OF PHILANTHROPIC ENTERPRISES.

F. N. STAPLEFORD, M.A.

THE Social spirit has become so all pervasive that there is scarcely an organization or an individual which has not felt its impulse. There is an ever-sharpened edge to the sense of responsibility felt by those who have some margin of means and leisure to devote to Community Welfare. An English statesman has called this "a voluntary tax on the unearned increment of social advantage." This movement is likely to receive a great impetus, due to the fact that very large numbers of people felt during the war (perhaps for the first time in any clear cut way) the joy of service and many of these will be loath to sink back into the boredom of selfish indolence. The field is inexhaustible, for no single organization, movement, or social theory can gather the whole complex, within itself. If properly organized and administered each contributes its own modest quota to the sum total of human progress and welfare.

In this great movement—this tidal wave of social endeavour, what is the place of the Church. The Church touches the problem at many points. One very concrete point of contact lies in the fact that the church itself is an organizer of philanthropic enterprises and operates, by means of a group of churches in a district or through some department representing the nation-wide church body, Orphanages, Rescue homes, downtown Missions, Hospitals, and other forms of social service work, the financial burden of which would be too great for any single local church.

In spite of the great development of secular agencies, the church is still strongly entrenched in this field of practical social work. Probably more than two-thirds of the practical, as distinct from the propaganda organizations in Toronto, are still definitely under the church control.

The Christian Church has always engendered social sympathy and very early the formulation of organizations under church control, for the humane care of dependent classes, has been a natural expression of this feeling. The question now at issue is as to whether the time has come for the church to surrender this function to the state or secular organizations. The church has been the originator of many great movements the control of which afterwards passed into other hands. In western civilization, education found its first home and early nurture within the church. This function has now been to a large extent surrendered to the state and outside the Catholic Church, there seems to be a fairly universal feeling that the change has been beneficial. Social workers are asking themselves whether a similar process is not going on in regard to social institutions and agencies. Having initiated so vital and fruitful a movement, has the time come in the interests of future development to surrender control, while still fulfilling its important function of being the inspirational force behind social work? The arguments for and against this proposal may be summarized as follows:—

(1) It is to the advantage of the church as an organization to have control of these definite social service institutions. It is practical demonstration to the world that the church takes its social duties seriously. It presents an obvious connection, between faith and practice, and having aroused social sympathy by its teaching presents some definite avenues through which this may find expression.

(2) The church can make sure that the workers taking charge shall be actuated by the loftiest idealism. Religion should be the spirit behind social work and it is of the highest importance that the workers should go to their work as an opportunity of service and not simply as one vocation or task. A mechanical and soulless administration is thus prevented.

There are, however, some important considerations to be presented on the other side.

(1) As a matter of actual practice the church has sometimes used social service institutions for propaganda purposes. An Orphanage may be valued not simply because there is a social need to be filled which the church undertakes to meet in an unselfish spirit of service but as a means of making sure that children will be brought up according to the tenents of some particular faith. This unconsciously influences the attitude of those in charge so that the terms of admission are sometimes not properly guarded.

(2) The church seems to be under a contsant temptation to let

good motives be a substitute for efficiency. It places large emphasis upon the psychology of the worker, his ideals and attitudes but is very apt to forget that social work is a profession requiring definite training and technical equipment. It should not be necessary to emphasize the fact that good-will is not alone sufficient, that a worker may have a fine religious spirit but blunder terribly in her work. This is partly also the result of the churches' mania for getting things done cheaply. In the long run an over emphasis on the motive of sacrifice reacts disastrously upon the standards of the work. On the whole, it may be fairly said that while many church institutions are vastly superior to some of the voluntary, or state institutions of a similar kind, yet on the whole, they rarely reach the standards of the best of the secular institutions.

If the policy be adopted of surrendering control of social service organizations it will of necessity remain true that the church must establish a close connection between the individual, roused by religious motives to a willingness to serve, and the actual avenues through which this noble emotion may express itself. It is not sufficient for the church to say to the individual "Go serve", but it must also answer the question "How serve and where". In every city and countryside there are great movements and organizations which would spring forward with renewed vigor if reinforced by men and women filled with enthusiasm and zest for humanity. The fight against disease, that ancient enemy of man, the manifold forms in which childhood is protected and developed, the reaction of greater safeguards and securities of life for women, the humane and scientific care of society's dependents, form a few of the avenues through which the social energies of religious people may be directed.

In her little book, "The Good Neighbour," Miss Richmond gives a concrete instance of what may be done in this regard, she says, "I am forcibly reminded of one who was called from this earth some years ago, but whose ministry in a large city church still remains an inspiration to many. His creed and mine differed widely and I seldom heard him preach, but there was no public task with which I was associated that did not show the influence of his daily endeavour to apply the gospel of Christ to the life of the city in which we both worked. The city's great network, with its tangles here, its gaps there, its complex of relations, political, educational, industrial, social—this huge net and its motley contents he saw largely and sanely, but with an intense compassion for the spiritually undernourished that were caught within its mesh.

Having in mind always that the exercise and development of the members of his own congregation in the Christian life was his highest duty, he set himself the task of studying first the needs of the city in which they lived; then the possibilities both social and spiritual of the many agencies created to meet these needs; and last, the aptitudes and capacities of his people. The city was their workshop and into it he fed them freely, associating them with every uplifting work that was going forward. Some of his men visited prisons and became volunteer probation officers in charge of individual boys, others founded an equitable loan company for the poorer sort of borrowers, and many worked hard in municipal campaigns. The women of his church visited families in distress under the best guidance that he was able to secure for them, and gave efficient aid on hospital committees and in children's work.

The church had no group of charitable buildings, no new charities to which it could point with pride; it was the city as a whole that bore eloquent witness to the power of his preaching.

Sometimes it seemed to me, an onlooker, that he played upon the community as upon a great organ, drawing from it new and inspiring spiritual harmonies."

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE FOR THE MONTH OF OCTOBER, 1922

COMPARATIVE TABLE

	1922		1921	
Diseases.	Cases	Deaths	Cases	Deaths
Smallpox	21	1	16	0
Scarlet Fever	369	5	154	15
Diphtheria	395	40	685	56
Measles	166	0	16	3
Whooping Cough	149	11	129	7
Typhoid	111	32	100	30
Tuberculosis	175	112	176	118
Infantile Paralysis	38	2	21	4
Cerebro-Spinal Meningitis	4	4	4	4
Influenzal Pneumonia	—	14	10	5
Primary Pneumonia	—	137	—	129

VENEREAL DISEASES.

	1922 Cases	1921 Cases
Syphilis	229	271
Gonorrhoea	170	256
Chancroid	2	4
	401	531

Notes on Current Literature

FROM THE HEALTH INFORMATION SERVICE, CANADIAN RED CROSS SOCIETY.

Tuberculosis Leaflet.—An attractive leaflet recently issued by the Canadian Tuberculosis Association on the benefits of Sanatorium treatment for the tuberculous. Copies may be obtained upon application to the Canadian Tuberculosis Association, Bank Street Chambers, Ottawa, Ontario.

Travelling Health Clinics.—A pamphlet recently issued by the Nova Scotia Division of the Canadian Red Cross, on the work of the travelling health clinic in Antigonish County. Copies may be obtained upon application to the Nova Scotia Division, Canadian Red Cross Society, 63 Metropole Building, Halifax, N.S.

Tuberculosis in Childhood.—A medical basis for a programme for prevention and treatment of tuberculosis in childhood. ("Journal of the Outdoor Life", November, 1922, page 364.)

Health Education.—Symposium on how to promote progress in health education and publicity, discussed at the recent annual meeting of the American Public Health Association. ("Public Health", Michigan, October, 1922, page 739.)

The Ideal Health Department.—A Committee of the American Public Health Association details the organization of an ideal health department for a city of 100,00 population. ("American Journal of Public Health", November, 1922, page 891.)

Our Knowledge of Vitamines.—The present status of our knowledge of the vitamines and its application to the dietary. ("American Journal of Public Health", November, 1922, page 908.)

Milk.—Observations conducted by the United States Public Health Service indicate that dried milk powders and their re-made products are safe foods for infants. ("Public Health Reports", U.S.P.H.S., October 6th, 1922, page 2415.)

The Industrial Schools of Canada.—The report of the inspection of Industrial Schools in Canada by the British Government Inspector of Reformatory and Industrial Schools in England. ("The Child", October, 1922, page 7.)

The Control of Venereal Diseases.—What can be accomplished through Public Health Nursing and Social Service. ("The Public Health Nurse", October, 1922, page 529.)

Malnutrition in School Children.—Comparison of methods of determining malnutrition in school children, based upon the Pelidisi method, the Wood height and weight scale, and physical examinations recorded by the Dunfermline scale. ("Monthly Bulletin", Department of Health, New York City, September, 1922, page 201.)

Health in Europe.—A series of three reports from the Health Section of the League of Nations giving recent epidemiological intelligence from Europe.

1. Eastern Europe in 1921.
2. Epidemics in Russia since 1914.
3. Epidemics during the first quarter of 1922.

Recent Advances in Sanitation.—By George C. Whipple, professor of Sanitary Engineering, Harvard University, Cambridge, Mass. ("Health News", September, 1922, page 196.)

Mortality from Tuberculosis.—The unnecessary casualties of Tuberculosis as described by Dr. F. Humbert, Chief, Division of Popular Health Instruction of the League of Red Cross Societies. ("The World's Health", August, 1922, page 376.)

Encephalitis Lethargica.—A report recently issued by the British Ministry of Health.

School Clinic Records.—A description of a simple process of record keeping that has worked smoothly and conveniently in a small British clinic with about 150 attendances a week. ("The Medical Officer", August 19th, 1922, page 75.)

Physical Defects in School Children.—The relation of physical defects to sickness as studied among over 3,700 school children absent from school on account of sickness. ("Public Health Reports", U.S.P.H., September 8th, 1922, page 2183.)

Diet and Good Teeth.—Miss Gillett, of the Association for Improving the condition of the poor, New York City, explains why dietitians should believe in oral hygiene. ("American Physical Education Review", September, 1922, page 318.)

The School Nurse.—The duties and responsibilities of the school nurse described by Dr. Taliaferro Clark of the United States Public Health Service. ("Public Health Reports", U.S.P.H., September 8th, 1922, page 2193.)

Office Administration for Health Organization.—Office administration for organizations supervising the health of mothers, infants and children of pre-school age, with special reference to public health nursing agencies. (Children's Bureau publication, No. 101, Washington, D.C.)

Commonsense in Factory Ventilation.—By C. E. A. Winslow, Professor of Public Health, Yale School of Medicine and Chairman of the New York State Commission on Ventilation. ("The Nations Health, June 15th, 1922, page 359.)

News Notes

November 13th to 19th in Cancer Week in Canada and the U.S.A. Efforts are being made to give as much publicity as possible to the increase in the mortality from this dread disease. The Academy of Medicine, Toronto, was honoured recently with an interesting address by Professor Carter-Wood of Columbia University, an authority on the subject.

The Toronto newspapers gave a good deal of publicity to the event, and printed long interviews with Professor Carter-Wood. The Provincial Board of Health of Ontario issued an article on cancer, which was published in over 220 newspapers throughout the Province, and in addition the Board has on hand for distribution, two pamphlets on cancer—one for the professional man and one for the layman. These pamphlets go into the subject very fully and should be read by everybody. Copies can be obtained on application to the Ontario Provincial Board of Health, Spadina House, Toronto.

Several meetings have been held under the auspices of the Toronto Board of Health that have had as their purpose a consideration of the problem of feeble-mindedness as it affects Toronto. A Committee was organized with Alderman Dr. Risk as Chairman Mrs. A. M. Huestis as Vice-Chairman, and Dr. E. A. Bott, as Secretary, to go into the matter in detail. In the near future a Research Committee composed of Dr. C. K. Clarke, Dr. George Anderson and Mr. F. N. Stapleford will compile a report relative to the situation. It is hoped that a presentation of the facts to the Board of Control and City Council will lead to the organization of better facilities for the solution of the problem of mental deficiency.

The Ontario Red Cross was at the scene of the Northern Ontario fire with the first relief train. To the Red Cross were entrusted the duties of giving nursing and medical aid; of registering the fire sufferers and making a survey of their needs; and of collecting and distributing clothing. The Provincial Red Cross supplied the staff to carry out these duties—two doctors, twelve nurses, one social worker and two expert railway men. The local branches throughout the province made and collected clothing and made donations to the relief fund.

In addition to the outpost hospital already established at Wilberforce in Haliburton County, the Ontario Red Cross has established one at Englehart in the Northern Ontario fire zone. These outposts are in charge of 10 nurses and carry on Public Health Education in addition to their ordinary work.

The Canadian Social Hygiene Council has recently organized Ontario branches in Ottawa, Kingston, Peterborough, Newmarket, Orillia and Windsor. There are now eleven Social Hygiene Councils in Ontario. It is expected that after the first of January extensive organization will be commenced in other provinces.

An effort was made by the Secretary of the Canadian Tuberculosis Association on his trip to the western provinces to have the dates for the Canadian Health Congress for 1923 fixed so that June 4th, 5th, and 6th could be occupied by the Canadian Child Welfare Conference, which will probably be held in Winnipeg and the Canadian Health Congress, which will probably be held in Alberta, to begin on the 6th and continue to the end of the 9th. Also that arrangements be made so that the programmes for the two conferences on the day of the 6th should be devoted in each case to considerations which would not cause conflict or overlapping to the interests of those attending both conferences. Further, this week would permit eastern Canadians and U. S. tuberculosis workers to travel west by the Canadian route, meet in Alberta and discuss Canadian tuberculosis undertakings and proceed to the coast with a week intervening between the Canadian week and the meeting in Santa Barbara, the week of Monday, June 19th, of the National Tuberculosis Association.

Mr. Clifford W. Beers of New York, author of "A Mind That Found Itself", and founder of the Mental Hygiene Movement, has been in Canada for several weeks assisting the Canadian National Committee in its work. Mr. Beers helped organize the Canadian Committee in 1918 and he has found that the Society has accomplished much of value during the last four and a half years. Canada was the second country to organize a National Committee for Mental Hygiene, and because of the progress made by the two Committees on this continent similar bodies have been established in Great Britain, France, Belgium, Australia and South Africa. Mr. Beers expects to visit these various committees in turn and to arrange for an International Mental Hygiene Congress to be held in New York in 1924.

The Ontario Provincial Board of Health has taken over the laboratory of the City of Ottawa, with the staff and equipment. The laboratory will in future be operated as a branch laboratory of the Board. Similar laboratories have already been established at Fort William, Sault Ste. Marie, North Bay, Owen Sound, London, Peterborough and Kingston. Dr. F. L. Letts, D.P.H., will be director of the new branch laboratory at Ottawa.

It is estimated that Mr. Pankhurst, speaking under the auspices of the Canadian Social Hygiene Council has addressed approximately 60,000 persons in different parts of Canada during the last year.

A meeting of the Executive of the Canadian Tuberculosis Association is being held in Ottawa at 7. p.m., November 28th, in the University Club. Important matters of policy will be decided upon at that time.

A proposal to start classes in sex instruction in the Public Schools for parents of the children will be considered at the next meeting of the Chicago Board of Education. This marks a new feature in the campaign for social hygiene. The proposal is to open the school rooms at night and the classes will be conducted by men and women of recognized standing, including clergymen, lecturers, medical men and welfare workers.

The Toronto Social Hygiene Council have inaugurated a series of Sunday night meetings in a large church, in downtown Toronto. Various phases of "Social Hygiene" will be dealt with by well-known speakers. Community recreation, community music, new educational possibilities and other subjects will be dealt with in the near future. These meetings are held after the ordinary church services are over, and it is expected that they will be the means of attracting large audiences. It is hoped that this type of educational propaganda will do much to further the aims of the Council.

Dr. J. W. Robertson of the Canadian Red Cross and Dominion Boy Scout office, accompanied by the Secretary of the Canadian Tuberculosis Association, is proceeding to the Maritime Provinces the first two weeks in Decmeber. Afternoon and evening meetings are listed for St. John, Moncton, Summerside, Charlottetown, Montague, Amherst and Halifax.

There still continues to be reports of cases of small-pox in the suburbs of Toronto. Mimico and New Toronto have had several cases recently, and in Mimico the Public School was closed for several days under orders from the Medical Officer of Health. One or two suspicious cases have also been reported from Agincourt

Editorial

CANCER.

CANCER killed 2,583 people in Ontario in 1921. This is a death ratio of 88 out of every 100,000 of population, the highest yet recorded for the province. The number of deaths from cancer in 1921 exceeded that of 1920 by 121. Any disease that causes 2,583 deaths in a year and sets up a death rate of 88 is exceedinly serious.

In Michigan the death rate from cancer this year is 86.6 per 100,000 of the population. In Ontario during 1921 the rate was even higher. Cancer is now killing one out of every ten persons over 40 years of age. Many of these deaths are preventable since cancer is frequently curable if recognized and properly treated in its early stages.

A comparative table showing the number of deaths per year from cancer in Ontario since 1902, and the death rate per 100,000 of the population, is instructive. It points out that while one or two of the years' figures show a slight decrease, the general tendency is towards a gradual but steady increase.

Year	No. Deaths	Rate	Year	No. Deaths	Rate
1902	1,048	47.3	1912	1,778	69.4
1903	1,156	51.3	1913	1,806	69.3
1904	1,253	54.8	1914	1,872	70.8
1905	1,224	52.8	1915	1,982	73.8
1906	1,411	60.0	1916	2,012	73.8
1907	1,329	55.7	1917	2,196	79.3
1908	1,348	55.7	1918	2,103	74.9
1909	1,597	65.0	1919	2,182	76.6
1910	1,587	63.8	1920	2,464	85.3
1911	1,602	63.5	1921	2,585	88.1

There is very little difference between the city death rate for cancer and the country rate. During 1920 the rate was 85 per 100,000 of the population. The city municipalities show 1,204 deaths or 48.9 per cent. of the total number, and a rate per 100,000 of 88.4; the towns of 5,000 population had 102 deaths, or 5.8 per cent. of the total number and a rate of 117.5; while the rural municipalities had 1.118 deaths or 45.3 per cent. of the whole, being a rate of 134.7 per 100,000 of population.

"The facts in regard to cancer are indeed serious," says the most recent report of the Registrar-General for Ontario. Leaving out the consideration that the apparent increase may be accounted for, to some extent by the improvement in diagnosis and more satisfactory death records, the fact remains that the mortality, according to statistical reports, has grown from 16 in 1881 to 88 in 1921 per 100,000 of population.

Hoffman, who has made an extensive study of this subject, points out that his investigations prove that cancer is increasing and that it is a real menace to all civilized mankind. It is probable that the number of deaths yearly in Canada would be not less than 7,000. Cancer comes fourth in our table of mortality. At ages over forty it kills one in eight among women and one in fourteen among men. It is a disease of adult life, and at ages over forty is more destructive of life than either tuberculosis or pneumonia. Its insidious onset often occurs at the most useful period of life, when the father and mother are the greatest service to society. It occurs when the man or woman, from their industry and thrift, might otherwise have had years of ease and comfort before them. Discovered in the earliest stages it is usually readily cured. Once established, the future is hopeless.

The chief hope of controlling the disease seems to lie in a well-planned campaign of public education, embracing facts such as the following:—

(1). That cancer in the early stages gives rise to no pain or symptoms of ill-health.

(2). That the early signs are:—

Any lump or mass in a women's breast after forty.

Any bleeding, however trivial, after the change of life.

Any wart or sore on the lower lip of a man forty-five years of age.

Any sore on the tongue of a man of forty-five years.

Any bleeding from the bowel in a man or woman after forty years.

(3). It should be pointed out that warts, moles or growths on the skin liable to irritation should be removed and that irritation of the tongue and cheeks by jagged teeth, or of the lower lip by clay pipes, etc., should be avoided.

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Industrial Hygiene

By Dr. H. A. Chisholm, *Halifax, N.S.*

WORK is or ought to be a necessity for all adults in order that they may be clothed, housed, fed and enjoy a reasonable amount of comfort. This must not be taken to mean that an individual must necessarily work in order to enjoy the comforts and necessities of life, but rather if comforts and necessities are to be enjoyed at all they must be produced, and production means work on the part of some one. Hence it follows that everyone should do something towards their production. We must bear in mind the fact that workers are producing the necessaries of life and the comforts for the public at large to enjoy. We should try to get away from the idea that men and women are working only for wages which they are to receive, and that the employer is working only for the profits he may acquire. Work is necessary for the continued existence of mankind, and if mankind work only for their own sustenance, we might as well go back to the primitive conditions of the savage.

Civilized life bring with it a complexity of living problems, and the solution of which can only be brought about by a wide vision of all those problems.

Industrial Hygiene aims to deal with those problems which concern the workers in the acts of production. It aims to enable him to carry out his tasks with the least possible harm and hardship, If it is necessary, in order to produce those things required for the comfort and pleasure of the public, that the worker should sometimes be engaged in hazardous occupations, trades or activities—activities that are attended by accidents, injuring life or limb, or the production of disease, then the public for whom these comforts, pleasures, and necessities have been produced should take upon itself the duty of compensating such workmen as become injured or diseased in such activities in the public's interest.

It would seem that the time is long since passed when the employer only should be held responsible for injuries or disease occurring to workmen engaged in those activities that are essential to the well-being, comfort and pleasure of the public generally.

The initial cost, the expenses of the upkeep and the repair of machinery are added to the cost of an article produced for the public good, likewise the expenses of the upkeep and repair of the workmen engaged in production should be borne by the general public. Leaving the money loss as well as the physical suffering to be borne by the workmen and his family is not fair, neither is it fair for the immediate employer to be obliged to bear the loss alone, seeing that he, as well as the actual workman, is engaged in producing those things which are demanded by society as a whole. Industrial diseases should be as much entitled to compensation as industrial accidents. At the present time most of our compensation laws apply to accidents only. It has been stated that 75 per cent. of all industrial accidents are humanly preventable, and that three out of every four occur because somebody was neglectful or careless. Man does not submit himself to serious accident from his own choice, but his carelessness at times makes us think that he gives very little thought to the matter. If he did give careful thought to the matter most accidents could be avoided. There are safety devices of many kinds thrown about him and warnings given at most every turn. In other words, he has a chance to avoid accidents, but can we say as much for industrial diseases. Such disease does not so clearly arise from neglect on the part of the working man, he has not the same warnings, it comes on him insidiously, unawares, and he does not realize that it is happening until it is almost too late. It is a hazard of his job just as much as is a broken limb or crushed hand. The more conscientious he is, the harder, and more honest his work, the more he strives to give good service, the more he is apt to suffer; if he is to continue to give good service in the interests of his employer and the public for whom he is producing, then his employer and the public should protect him.

Industry, in the interests of production, is generally quick to seize upon anything which makes for increased efficiency. Invention has succeeded invention, improvement after improvement has been effected, and great strides in advance have been made in comparison with the conditions of industry as they existed years ago. But has this advance been made by improving machines, at the expense of man power? Has the centralization of industries in the larger centres been for the good of mankind or not? Has as much attention been given to the men who operate the machines as to the improvement of the machines themselves? If not, and if man power has deteriorated as a consequence, is the procedure economically sound? Experiences of the past war have shown that the agricultural population of the country possessed the best physique and that part of the population engaged in industry the poorest. Is industry responsible for this situation, and is it doing anything to remedy the matter? Industry needs efficiency to-day if it ever did, and it cannot get efficiency from an inefficient man power; and man power that is unhealthy is sure to be inefficient. Surely industry might devote some portion of the energy and enterprise which it has expanded upon mechanical devices and process development to the study of the human side of efficiency. It surely does not seem economically sound to entrust grade one machinery to a third grade man power. Neither does it seem sound that the result of industry should be a third grade man power.

The public health service of the country is now generally well organized, and the people are reaping the benefits of the labors of those who have taken up the work as their life's career, but industrial hygiene is still in its infancy. It is not as yet properly organized, neither has it been given a prominent place in the curriculum of the medical schools.

This is not because it is a new question. More than two hundred years ago Bernadino Ramazzini (1700), an Italian physician drew attention to the influence of occupation on the health of the workers in certain trades. It is now nearly a century since the statesmen of Great Britain recognized the fact that occupation was never meant to cripple the workmen, cause ill health, nor induce early death, but that the fruits of occupation depended upon the health of the workers. And although it took nearly half a century to get the necessary legislation through parliament the result is evident in the present death rate of Great Britain as compared with that of our country. At the dawn of the public health movement in Great Britain the annual death rate was 37 per 1,000, today it is only 12 per 1,000. In our country the death rate is 14 per 1,000, notwithstanding the fact that the population is largely rural. Our rural death rate is not greater than that of the United Kingdom, consequently the cause of the higher death rate must be sought in our industrial centres.

What, then, is the cause and what is the remedy? Has industry been prodigal in using up our man power? It is felt that a careful investigation would show that there are not many skilled men over the age of fifty. They are practically used up by that time. A skilled man of fifty is a most important asset to any industry and to the community in which he lives as well. He possesses not only a skill and experience that is essential, but he exerts a useful, steady influence for the community. One of the important things to be aimed at industry to-day should be to grow healthy old men. This end can be attained by medical supervision and careful forethought. Industry, assisted by the State, should arrange for medical examination, so that workers are selected for the occupations for which they are fitted. Workers should be advised not to follow occupations which are manifestly injuring their health and bringing about an early death. In this land of opportunity there should be an opportunity for every willing worker. Here is an opportunity as well as a duty for industry. Industry needs healthy and efficient workers. It is therefore the duty of industry to maintain the worker in health and efficiency, as well as to prevent the occurrence of accidents and disease. The State is now giving attention to the growing child at school by medical examinations, and many agencies are at work on maternity and child welfare. The community or state is entitled to some return from industry for the cost incurred in bringing up healthy individuals ready for employment. Industry must no longer use up this material, and when used up throw it aside to be supported by the state. Preventive medicine should be practiced by industry as well as the State. Our cousins to the south have appreciated this as a fundamental necessity, and many of the industrial establishments in that country employ whole time medical men to maintain the employees in a healthy condition. They have discovered that a factory doctor is as paying a proposition as a works engineer.

The matters that call for supervision may be briefly enumerated as follows: First, there is the air breathed by the workers, and the illumination of the places he works, then the cleanliness of the workshops to ensure that they are free from dust and refuse. These are not simple matters, and should not be left to chance, but are of prime importance in the matters of health and efficiency. Then, secondly, the workers themselves require provision for their personal hygiene; cloak rooms and good lavatory accommodation. Workers need a place where they can eat the food they require. First aid organizations, both for accidents and sickness, call for medical supervision. Then, when all these things have been attended to, there still remains a demand for careful watching on the part of the physician to detect the earliest signs of disease, contagious as well as otherwise. Then there is the question as to how soon a worker may return to work after illness and the amount of work and the kind of work he should be allowed to do. It would seem manifestly wrong to prevent a man from resuming work gradually so as not to overtax his powers. The general rule to-day seems to be that unless a man can do a full day's work he is not wanted. This should be remedied.

There can be no question as to the necessity for greater attention in industry to the maintenance of efficiency and the prevention of accidents and ill health. We should therefore proceed to consider the means to attain that end. With this end in view investigation should be set on foot to determine the actual amount of illness caused by industry in this country. Illness is often the forerunner and the cause of accidents. Hence it seems but a very short-sighted policy to limit our attention to the endeavour to compensate workmen for accidents only. Let us therefore search out the cause of ill health among the workers. The medical schools should be approached to give a more prominent place in their curriculum to the study of industrial disease. It is thought that under the direction of the provincial public health departments movements could be inaugurated to determine what industrial diseases the workmen of the country suffer from, and when that information has been properly and accurately obtained legislation should be sought to provide the necessary remedies. In order that such investigation can be carried on by the Health Departments it would seem necessary to pass such enactments as would ensure that all industrial diseases and accidents be reported to that department.

A disease can only be prevented by removing the cause. If the cause cannot be entirely removed, then the disease must be controlled as much as possible. It can only be controlled satisfactorily when all existing causes and resulting diseases are known. This is true equally of industrial diseases, as it is in the case of infectious diseases. It would therefore seem apparent that industrial diseases should be reported as well as communicable diseases. The notification of such diseases would have little value other than statistical unless the source and cause of each case is thoroughly investigated by competent investigators, and the remedy sought through the intelligent and hearty co-operation of the public, the physician, the patient and the employer.

Reports should be made by the physicians because by their training they should be better able than anyone else concerned to recognize the nature of the disease and ascribe to it its true cause. Our medical schools should devote more of their time to teaching the intimate relation of occupation to the diseases found in industrial communities. The present physician can at least report the disease accurately and ascribe to its most probable cause. Upon the medical profession therefore devolves the duty of giving effect to one of the chief means of accomplishing the early control of diseases of occupation or retarding its accomplishment. Notification should be sent to the Provincial Boards of Health, who will cause accurate information as to the disease and its cause to be made available, the case investigated and measures taken for its cure. The information should then be forwarded to the Department of Labor, who should investigate and correct the industrial causes which led to the condition and thus prevent others.

The health of the people is one of the principal assets of any nation. If the production of commodities and the manufactures are to be increased the health of the workers must receive prime consideration.

The money now spent in litigation, supporting ambulance chasers and liability companies could go to supporting the injured or diseased workman and his family. Expensive annoying and unsatisfactory litigation could be reduced to a minimum if the principle of the public's responsibility were admitted as to compensating an injured or diseased workman. For this purpose legislation is necessary. Legislation that will secure, *investigation, education* and *administration.*

Considerable amount of work has already been done by various commissions in all countries in investigating the causes of industrial diseases and injuries, but in order that a more accurate and useful knowledge of these causes may be obtained a great deal more work remains still to be accomplished.

No large business or enterprise can be economically or profitably operated unless the most accurate knowledge is obtained and secured as to the smallest details of cost, operating expenses, waste, profit and loss generally; similarly in legislating for the protection of the workman and the prevention of the accidents and disease that he is subject to and suffers from it is absolutely essential that the most accurate and detailed reports be obtained as to these accidents and disease. It therefore would seem necessary that they should be reported in detail and with the greatest accuracy to some central authority that would be capable of and prepared with the scientific knowledge for acting thereon in order that the greatest amount of education can be prepared and made available to those engaged in industry and interested in the health and well-being of the workmen engaged in production.

This giving of protection to all workers who acquire disease as a result of their occupation as well as compensation for accidental injuries would be but discharging our full duty to those engaged in acts of production for the good and comfort of mankind.

It has been thought by some that such an additional burden would be a tremendous strain upon industry. But the result has been found to be otherwise. In the State of Wisconsin, with over two years' experience, carefully collected statistics show the added cost to be only one per cent. of that incurred for accident compensation. The average indemnity per case is slightly less than for accidental injuries, but the average medical expense per case is slightly more than for accidents. In the beginning the Wisconsin rate on each classification was increased one cent to cover the cost of occupational disease, but later this increased cost was found to be unnecessary. Other States have had a similar experience.

Proper sanitation of the plant and proper supervision of the employees exposed to dangerous processes will almost entirely eliminate the danger, and where the disease is not allowed to gain headway, quick, competent medical attention will cure it with less disability period than generally results from accidents.

Attention to working conditions are reflected more quickly and more extensively in the reduction of the cost of medical and indemnity benefits for disease than has resulted from accident prevention work.

Some Phases of the Mental Hygiene Problem

BY ERIC KEITH CLARKE, M.B.

Read before the annual meeting of the Canadian Public Health Association, St. John, N.B., June 8, 1922.

THIS subject is one that has led to a great deal of controversy betwen the educationalist and the medical profession as to whose jurisdiction the problem of the subnormal child—his education and foundation for his future—lies. For many reasons it is felt in Toronto that it is really a health problem, and although at the present time some argue that we are doing little to prevent the spread of mental defect and its associated evils, I think that the school is the place to start the work. To control the problem absolutely, it is argued that all these unfortunates should be segregated. This may be literally true, but public opinion would not stand for such measures at present.

It must be borne in mind that every child has a right to an education suited to his capacity and needs. This includes the subnormal as well as the normal child. The former is an essential to the community for we must have the hewers of wood and drawers of water with us always, but they must be educated into efficient workers in the sphere they are to occupy.

The unstable subnormal individual, with little or no moral sense, requires institutional care in many cases for his own safety and the safety of the community. Other cases require care on account of poor environment, so that they can be educated to stand a chance or survival when thrown into the fight to maintain existence in the community.

A great number of subnormals, who are steady going, law-abiding citizens, are in the community at present in various occupations which require little skill. They fill a very useful and essential niche in industry. Our object is to make them efficient workers, to guide them, to prevent social disaster happening to them, and give them a chance to make good.

It may be true that at present we are doing little to prevent the increase of the numbers through parents of low mentality. In the past, as I will endeavour to show later on, we imported some very poor stock from other countries, and by our slack immigration laws allowed some undesirable types to settle here. We are paying for that now, and also trying to prevent the recurrence of such a catastrophe by strict immigration inspection. The other required measures within our land must be brought about slowly—to take drastic steps would be fatal. The cause would become very unpopular, and more damage than good would be the result. The general public must be instructed gradually and slowly to the real danger of the uncontrolled, uneducated, and uncared for mental defective. That the mental defective, who, through his inability to exist in the community through his incompetence and anti-social tendencies, costs the Government from $8,000 to $10,000 to maintain in institutions, should mean much to the tax payer. But the fact that the majority of these cases by proper education can be made self-supporting citizens and an asset to the country should mean more to the same taxpayer.

So much has been written on the subject of the mentality of the school child that I am afraid there is little left that is original for me to say, and I feel that I have been honoured by being called on to express my opinions before such a distinguished gathering. Although in Canada we have far to go before we can attain the ideal, the work has been progressing quietly for some years, the beginning has surpassed expectations, and there is no need to be disappointed in the results.

Until the last few years no scientific attempt was made to classify the children of school age in their respective groups, and while the teachers realized they had many problems they could not deal with adequately, nothing was done. In the city of Toronto, with a school attendance of almost 100,000, two auxiliary classes were in operation, not for defective pupils, but merely as "promotion classes" for the retarded ones, where individual attention could be given with an objective of returning them to the ordinary grades as soon as possible. Early in the work these classes were surveyed, and as was to be expected, the majority of the children were cases of subnormality, one class having five unteachable imbeciles, who were a nuisance to the teachers and a menace to the other children on account of their instability and anti-social tendencies.

The statistics of our survey do not materially differ from those of other cities that have been studied in Canada and the United States, approximately two and one-half per cent. of our total attendance being mentally subnormal. The percentages in schools in different sections of the city of Toronto have shown that in certain good residential districts less than one per cent. are subnormal, while in districts of a poorer type as high as 5% to 6%, or, in two instances, even 10% and 11%, respectively, of the total population were definitely below the line.

In the survey some interesting and important data has been gathered. In one district, where we found a percentage of 10.4 were mental defectives per total school attendance, very useful information was obtained. At first it was difficult to explain why such a large number should be found in that particular section. To the north was a large school with only 2% subnormals in attendance, to the east another 2% school, to the south 1.8% and the west 4%. In the centre was a school with 10%. Maps of the city, however, dating ten years back, showed this centre school just outside the city limits, in the county, and with the growth of the population northwards and westwards this school had come into the city. Formerly this was "shack town," and there the poorer element of the original settlement still remain, forming a nucleus for mental defect. This same thing was also proven in two other districts where similar conditions existed. A scanning of the occupations of the fathers showed that the majority were of the ranks of unskilled labour, low wage earners, and unfortunately it was a colony largely made up of comparatively recent arrivals from overseas. Of the 10% mental defectives in the school 30% were foreign born children, while 40% were children born in Canada of foreign parents, the remaining 30% being of Canadian parentage. Facts similar to these are found in the majority of our schools—approximately 30% of the subnormals being foreign born children, 40% to 50% Cnadian born children of recent arrivals, while only about 30% are Canadians. This goes to show that Canada is to-day paying for its past laxness in immigration matters, and that it has been the dumping ground for many citizens of undesirable type. To-day Canada's immigration law has strengthened our barriers, but a most serious flaw in our present system is the granting of special permits of entry by the Minister of Immigration. These have been issued in many cases where deportation is recommended by the Department of Health, and mental defectives allowed in for the sole reason that they had political influence in Canada.

It was doubly of interest when last year while this school survey was in progress that during the wave of industrial depression which struck Toronto it was found that this district of recent arrivals was one of the most seriously affected, and needed most urgent relief measures. The parents in the majority being low wage earners were unable to save, and consequently a week's unemployment brought them to the end of their resources. If one child of a family is found to be subnormal in a school an endeavour is made to see the other members of the family for purposes of record, and the gathering of statistics.

In one series of 538 subnormal children, 163 families were found to have more than one subnormal child in school. As this was early in the work, before we were fully organized, it is by no means a complete record, as it was impossible to visit all the homes, and the number of families having subnormals not attending school could not be estimated.

One of the problems in Canada has been that of educating the teachers, and it has been found practically universal that they welcome the assistance. In some instances, the work has been unduly complicated where inexperienced enthusiasts have felt competent of handling the subject and by rule of thumb methods have classified pupils according to their own interpretation of the tests. This has been unfortunate. The work has only been organnzed a little over two years,—during the war all new work was greatly impeded owing to insufficient staff,—but with the signing of peace and the return of our forces, it was felt that now was the time to carry on more constructive work. Dr. Pratt accomplished the task very well, and is to be complimented, but he was without assistance and had some 100,000 children facing him.

With inexperienced and untrained examiners the abnormal child is apt to slip by unnoticed, if one looks only for the obvious mental retardation. The psychopathic child is probably of greater importance than the mental defective for early recognition, as prompt treatment is in many cases all that may avert a tragedy. In one school survey a child was brought for examination as an infant prodigy. The lad was eight years old, undersized, with tired out expression, was short-sighted, anaemic and had many of the stigmata of degeneracy. To be sure his intelligence quotient was 165 % by the Binet Simon tests, but the child was definitely abnormal. The recommendation that the boy be removed from school and placed on a farm for a year, was ignored by the teachers and parents. They were indignant at such a proposal, but the inevitable happened, the child broke under the strain, and to-day sits in school laughing continually, inattentive, with all his brilliancy gone. There is little doubt that he is an early case of Dementia Praecox, but it is a year too late to start treatment. This case is only one of the many that will go unrecognized without psychiatric attention.

At present the survey staff consists of four, a psychiatrist, two specially trained psychiatric nurses, and one special worker. Even with this number we are under-manned, as at least a staff four times the size is necessary to carry on in a satisfactory manner. It is urgent that a supervisor for the Auxiliary Classes be appointed by the local Board of Education. There are thirty-three of these classes in operation at the present time, and it is hoped that an additional twenty may be added by Christmas. There is no one person responsible for these classes, and lying as they do in widely spread inspectorial districts there is a lack of uniformity. Dr. Sinclair, the Provincial Inspector of Auxiliary Classes, has so many problems on his hands that it would be asking too much for him to give the constant supervision required.

Early in the work to prove the point that there were sufficient subnormal children in schools to warrant special facilities for their education the work was mainly one of gathering statistics. This we have demonstrated, and while it is endeavoured to study the child as an individual we find it is impossible to do this as fully as is desired.

An observation centre has been asked for, and it is hoped will soon materialize. In this centre each child could be studied at length from a physical—as its relation to the study of the metabolism of the child has an important bearing on very many of these cases,—as well as psychiatric standpoint, a home investigation could be fully made to co-relate the home environment with the school history, and the educational and industrial possibilities of the child tabulated before he is returned to his district class. Even under existing circumstances these classes have proven to be successful, and the improvement in the children remarkable. Truancy has been reduced, and the principals find that the removal of these unfortunate children from the general classroom makes a material difference in the discipline of the school, while the teachers have far more time to devote to the average child. Very little antagonism has been encountered on the part of the parents of children attending these classes. This was feared would be a big factor when the classes were organized, but, on the whole, the parents are willing to co-operate, for in the majority of instances they recognize themselves that there is retardation.

With the beginning of the school term in September, another problem will be added to our list. Formerly it has only been necessary to provide for pupils up to the age of fourteen. The Adolescent School Attendance Act, which forces all children to attend school until sixteen years of age, and part time attendance from sixteen to eighteen, comes into effect then. This Act is splendid in its ideal, but makes the same serious mistake in that it assumes all children to be of equal mentality. The object of the Act is to turn out all children with at least an Entrance examination standing.

With the subnormal individuals this is asking too much, as the maximum mental development possible is still far below the desired point. The additional work planned by the educationalists for the additional two years is mainly academic, while even in the conditions that exist at present the subnormal is an academic failure.

To meet this new regulation, we are faced by a really serious problem. It is undoubtedly a splendid thing to keep the children until sixteen, if they can be advantageously dealt with. The spirit of the Act is good, but like so many other legislative measures, the details have been overlooked. To compel the subnormal to two years extra academic work is an actual hardship. Fortunately the majority of this type have educational possibilities along manual training lines, and it is in this direction we must make an advance.

It is our hope that in the near future it will be possible in Toronto to establish a school for underprivileged Adolescent children between the ages of thirteen and sixteen. It is desirable to segregate the sexes at adolescence for many obvious reasons, although in the junior auxiliary classes the children may be mixed with safety. It is hoped that the school will take the form of a Central Trade School. Part of the day will be spent on academic work, but the majority of the time will be spent in the work shop. For boys—carpentry, cobbling, brush-making, weaving, painting, tailoring, a basketry, blacksmithing, etc. It is along these lines of work many will be employed later in life, and the object is to turn them from school with a trade that will enable them to support themselves fairly well.

The girls can be taught the various branches of household science and the domestic arts, sewing, cooking, dressmaking, millinery, household management, etc. Such schools have been established throughout the United States, and are proving to be very successful. In Canada as yet nothing has been attempted. From the Opportunity School a placement bureau could be operated, to place the graduates direct into industry, in situations which are suited to the individual.

It must be remembered that the work is still in its infancy here, and has only been carried on for the past two years. We are proud of our results, and although it is realized that we have still far to go before we will have a system that is our ideal, the start has surpassed expectations.

The Source of Infection

By Dr. J. J. Cameron, M.H.O., Antigonish, N.S.

Read at the Annual Meeting, Association of Medical Health Officers of Nova Scotia, Sydney, July 4, 1922.

CAPACITY to rear and support men constitutes the extent of a country; and population is the biological measure of the social organism. Notwithstanding the deluge of fratricidal blood that recently swept and decimated our country, the ceaseless energy of the race will plant yet a greater population. Growth great and rapid is inevitably before us. The growth of nations as of individuals requires the vigilance of guiding hands. Growth, to take its course rightly towards perfection requires that provision for the security of health forerun rather than halt behind the actual requirements of the hour. As the fields of knowledge fall ripe under the ceaseless husbandry of the world's thought, those who would join in the great reaping and not only glean where others reaped before them, must cultivate for themselves. To do this requires more than individual devotion to the goddess Hygeia and the laws of health. It requires the co-operation of whole groups of individuals. Thus, organized inquiry becomes in advanced countries a conscious aim of the community, as a community.

For some years preceding the great war the world was devoted to the feverish effort of getting money by any means and spending that money for selfish enjoyments. The majority thus engrossed were blissfully unconscious to the defects and selfishness of this mode of living, and of their obligations to their fellow man.

A false Philosophy based on commercialism and material progress placed individual and property rights on a higher plane than human life and civic welfare. Have selfishness and pleasure-seeking been superceded by sacrifice and self-denial? I fear not. Today, perhaps more than ever, the mad, restless onrush for selfish enjoyments, especially among the young, stands as a barrier against the stability and progress of the country and the health of its citizens.

As education is the key to progress along humane lines, it is incumbent upon our universities especially, to know what the needs and requirements of social life are. The university should clearly interpret the health requirements, as well as the social and economic life of the community. Next year an extended course in public health will be placed on the curriculum of the People's School—an extension of St. F. X. University. Thus a broader, utilitarian school system will realize that it is not designed for the favored few who can afford a college education, but for every mother's son, rich or poor, black or white, the artisan and day-labourer, as well as the clergyman, doctor or lawyer. Every large boarding-school should have an organization to inculcate the laws of health; to train students in the study of personal and community hygiene and sanitation, who in turn will spread the gospel in whatever community their lot may be cast.

The "Source of Infection" is the pivotal point upon which turns the arrest and suppression of all the communicable diseases. The difficulties encountered in tracing communicable diseases to their source are well known to every health officer. But when we remember that the source of infection of the communicable diseases of man, is man himself and to some extent the lower animals the difficulties are not insuperable. Most of the communicable diseases of man, especially those which appear in epidemic form are peculiar to man. This is true of typhoid fever, malaria, cholera, mumps, leprosy, yellow fever, measles, scarlet fever, small-pox, chicken-pox, syphilis, infantile paralysis and even tuberculosis in part. We must not forget, however, that man also contracts a number of infections from the lower animals, particularly the domesticated animals, as rabies and echinococus cysts from the dog; glanders from the horse; trichinosis from hogs; plague from rats; anthrax from cattle; malta fever from goats; tapeworm and other animal parisitis from the meat fowl, fish and mammals; tuberculosis in part from cattle; ring-worm from cats and cattle; fleas from dogs, etc. The number of diseases thus contracted is notably less than those contracted from man himself. All of the above diseases are caused by the activity in the body of some disease germ. By the aid of the microscope, the germs are found in the secretions and in the blood, and further study of the blood will reveal the cause of cancer, scarlet fever and measles as yet undetected. We know then the infective agent, the source of infection, the mode of transmission, the incubation period, the period of communicability of most of the communicable diseases. Heretofore measures of suppression were largely applied to environment, as garbage, sinks, cesspools, cleanliness, concurrent and terminal disinfection, etc. Heretofore environment, water, soil, air and food were regarded as the source of infection. We now know they are media of conveyance, rather than the source of infection. As a matter of fact most of the micro-organisms causing infectious diseases soon die in our environment as in the air, soil or water. Rosenan says that most of them are obligate pathogens and cannot or do not grow or multiply in our environment. Does the hypothesis that the infected person is the source of infection preclude the possibilities of the kitchen sink, the garbage pile or the cesspool? Is environment of no effect? Are dirt and a lack of cleanliness at a premium? A shock to our asthetecism and self-respect surely, but how can flies and milk and garbage cans carry infection if there is no infection to carry? The infection must come directly or indirectly from the infected animal or person. Most of the infectious diseases must be fought in the light of an infection from man to man, and this new thought crystallised out of a mass of work is the key-note to modern preventive medicine. A large number of diseases are spread by discharges from the mouth and nose. Ordinary "cold" is an example. We know for a fact that influenza, pulmonary tuberculosis, pneumonia, whooping-cough, measles, scarlet fever, infantile paralysis, mumps and chicken-pox are spread by discharges from the mouth and nose. Some of these, as tuberculosis, can also be contracted by ingestion, that is, by some infected article of diet, as tuberculous cow's milk. Fortunately, however, the number of diseases "caught" from animals is small.

Perhaps the best example of diseases which are conveyed indirectly through contamination of water or milk or some article of food is typhoid fever. It has been abundantly proven that typhoid fever is nearly always caused by ingestion, that is, by partaking of water or milk contaminated by the excreta of persons suffering from the disease. Personal cleanliness, a pure water supply, and sewerage systems, inspection of milk, the suppression of flies, are the best preventives, not alone of typhoid, but of the other communicable disease, as well. Prevent water and milk contamination from excreta of the diseased and round up the "carriers" and there will be no need for typhoid vaccination for the reason there will be no typhoid.

When an outbreak of communicable disease occurs, we first seek the infected person, then the possible routes over which infection could have travelled to him, and lastly, those to whom he could have transferred the infection. This survey sometimes is easy, but more frequently so difficult as to demand the skill of the best detective. When we remember the source of infection is man himself and that the disease comes rather directly from him, although at times it takes a very tortuous route, we are encouraged by the knowledge that isolation will prevent further spread from the quarantined at least. Control of the infected is the hope of the world—the ideal in preventive medicine. Remove the source of infection, and the task is done. This is the aim of the Department of Public Health. Supported by a staff of efficient Health Officers, by an intelligent and sympathetic public, by Municipal, Provincial and Federal Governments, the Department will be gratified to see in very large measure the fulfilment of its aim of reducing tuberculosis, and the other infectious diseases, already on the wane, if not to the vanishing point, at least to a point where the percentage was never so favourable.

A humane endeavour, the consummation of which will command public support and appreciation for its economic value, as well as its humanitarian conception.

The Value of Quarantine in Communicable Disease

BY J. J. MIDDLETON, M.B., D.P.H., *Provincial Board of Health, Ontario.*

IN almost every effort put forth by Public Health Officials and the medical profession generally, towards the better prevention or control of communicable disease epidemics, there is some obstruction in the way of a complete carrying out of the preventive measures that are considered necessary. This may be the result of opposition by individuals through lack of knowledge of the value of sanitary measures, or through wrong impressions of the purposes of sanitation; or it may be due to a laxity in the carrying out of the regulations themselves. Whatever the reason for, or the nature of the opposition, it must be removed or overcome else the disease will gain headway.

In drawing attention to some points on the value of quarantine in the control of communicable diseases, it might be well, at the outset, to try to define the meaning of the word and exactly what it implies.

Quarantine is Italian in origin, derived from the word "quarante," meaning forty, and was applied as early as the fifteenth century to the practice of detaining ships for 40 days if there were actual or suspected cases of infectious diseases on board.

Quarantine means isolation for a certain definite period, of the sick, or the infected, or the possibly infected, e.g., contacts. In the case of a person ill with a communicable disease the duration of quarantine lasts until the infectivity of the disease has passed, as for example, the taking of two negative swabs after an attack of diphtheria. As a preventive measure quarantine coincides approximately with the incubation period, of the disease in question and in the case of contacts the quarantine is raised, if, after the expiration of the incubation period, no further outbreaks of the disease have developed. The purpose of quarantine as regards individuals, is to prevent the transmission of the disease from the sick or infected to the healthy. This protection is essential in the light of present day medical science, which has demonstrated beyond a doubt that the chief path of communicable disease transmission among human beings is from person to person.

Quarantine regulations are, or can be, established in several ways. Perhaps the oldest known form of quarantine applies to the detention of ships carrying communicable diseases, or coming from ports where communicable or epidemic diseases exist. Quarantine also applies to the detention of persons in infected localities, and to the detention of occupants of a house in which there is a case of infectious disease. The first is commonly spoken of as maritime quarantine, the detention of persons in infected localities as inland quarantine, and the last as house quarantine.

Maritime quarantine in England, United States and Canada is especially directed against the entry of those terrible scourges of the tropics, viz., cholera, plague and yellow fever, but other threatened invasions of epidemic and pandemic diseases have from time to time been kept out by rigorous quarantine regulations.

In the case of yellow fever, Surgeon-General Cumming of the United States Public Health Service, in an address at the American Public Health Association's Convention in New York last week, cited the effectiveness of quarantine in preventing the disease from gaining an entrance to the United States, although its harbours were approached from time to time by infected and suspected ships from Mexico and other sub-tropical and tropical countries.

A striking example of the value of maritime quarantine in retarding the progress of an epidemic was afforded in Australia during the war when preventive measures were successfully undertaken in the Australian ports to keep out the influenza which was exacting a heavy toll of life in all European countries and on the American continent. As a result, in spite of the thousands of troops returning, there was no outbreak of "flu" in Australia until months later when the disease had become practically pandemic.

The value of quarantine in cholera prevention is shown in the case of the steamship *Adana* which left Jeddah in August, 1891, with pilgrims from Mecca, and arrived at El Tor a few days later, having had eighteen deaths. The pilgrims were strictly quarantined at El Tor, and, as a result, no cholera developed in Egypt.

However elaborate or complicated the process of quarantine may be, the end in view is to prevent the transmission of disease from the sick or infected to the healthy. Dr. Chapin says that, as far as experimental evidence is concerned, there is no ground for belief that the common infectious diseases have a source outside of animal bodies. Belief was held at one time by certain observers that the specific poison of many infectious diseases and particularly of typhoid fever and cholera, developed in a contaminated soil, or in other forms of filth. The filth theory was held at a time when there was no knowledge of the micro-organisms which cause disease, and when theories as to the origin of disease depended on clinical or epidemiological evidence.

In the case of anthrax, it is generally agreed that the soil may become infected with anthrax and remain so for a long time. Deléphine, however, after studying recent outbreaks of anthrax in Great Britain, is of opinion that the importance of the soil in transmitting the disease has been exaggerated and is convinced that the disease is perpetuated through the air or by a more or less direct contact, chiefly with unrecognized or concealed cases. In wool sorters' disease, the spores are believed to come directly from the infected hides or wool.

Recent studies and investigations as to the origin and paths of infection make it clear that carriers and missed cases, as well as the sick, are largely responsible for the spread of communicable diseases. In some instances it appears that carriers may be non-infectious, certain persons harbouring the bacilli of typhoid and diphtheria in their systems having remained for long periods without apparently infecting members of their family or others brought in close contact with them, but as a general rule the chain of evidence against typhoid carriers is complete, this disease more than any other being spread through water, milk or food. Outbreaks of typhoid as a result, are often found to have their origin in some definite locality, and can thus be traced to a single house and even to an individual.

An interesting example of the transmissibility of disease by personal contact is related by Dr. R. W. Bell, of the Provincial Board of Health. A young man returning from the West had a long drive to the station in a buggy, and he noticed that the driver who occupied the seat beside him had spots on his face. Ten days later this young man went to a dance and four days after this was taken ill with smallpox. Exactly two weeks after the dance, no less than nine people with whom he had come in contact that evening, developed smallpox, the inference being that direct contact may transmit the disease during the incubation period. With regard to measles, it is now generally believed that there is little likelihood of transmitting the disease before the ninth day of the incubation period, and hence, contacts need only be isolated from the ninth to the fifteenth day.

In the case of tuberculosis, experiments have been made showing that the disease is transmitted by droplet infection, live tubercule bacilli having been found on a glass plate in the ventilating shaft of the Brompton Hospital for Consumptives, London. Except for direct contact it is chiefly through sputum from open cases that tuberculosis is spread. Smallpox is probably the only disease that is carried to any distance by the air outside of dwellings, and in the case of plague, no evidence can be brought forward to show that air has any effect in its spread, the rat and the flea being the direct steps of transfer of the disease to human beings.

Many instances are, of course, on record, where quarantine regulations seem to have failed. However, wrong or delayed diagnosis, the presence of carriers, of mild or missed cases and a laxity in the enforcement of quarantine laws are oftener the real causes of failure.

Apropos of the effectiveness of isolation in epidemics, I have in mind a controversy that arose in Belfast in the Fall of 1919 during a severe outbreak of scarlet fever. The Medical Officer of Health had been urging the necessity of an early and complete diagnosis, and at the same time distributed pamphlets, notices, etc., pointing out the fact that it was the mild and missed cases that were chiefly responsible for the spread of the disease. A newspaper discussion broke out as the result of this publicity, the opponents of the Health Department's activities asking why the citizens were saddled with the enormous expense of keeping up an isolation hospital when it was not effective in controlling the outbreak. In view of the very doubtful diagnosis of many cases and the prevalence of missed cases, and the difficulty in tracing the origin of the outbreak, the consensus of opinion in Belfast seemed to be, that in a large city of this kind, the isolation hospital, while not of much value in lessening the prevalence of an epidemic, yet is effective in providing better care and treatment for scarlet fever cases with a resulting decrease of mortality.

There is a difference, however, in the case of a village or small community. In applying isolation to the prevention of disease, Dr. Chapin says it must be kept in mind that different conditions require different procedures. Thus, when an ordinary contagious disease first appears, after a considerable absence, in the small community, or in an institution, very rigorous measures of isolation are usually desirable, as experience has shown that very often an outbreak can be quickly traced to its origin and is thus effectively checked in its beginning. The value of isolation under such circumstances is well illustrated by the history of outbreaks of the common contagious disease in the smaller cities, townships and villages of Michigan.

Following is a partial summary of some of the tables in the report:—

NUMBER OF CASES PER OUTBREAK.

	Restricted measures not enforced.	Restricted measures enforced.
Typhoid Fever	6.72	2.22
Diphtheria	4.85	1.71
Scarlet Fever	10.43	2.53
Measles	27.60	4.67
Smallpox	32.00	3.80

It appears from the figures supplied that isolation and disinfection if practiced in the smaller communities can reduce the cases of contagious disease in round numbers from forty-five to ninety per cent. In scarlet fever, diphtheria, measles and smallpox, isolation appears from the reports, as one would expect, to have very much more restrictive effect than disinfection.

In the United States, quarantine methods are being tried out in dealing with Syphilis and Gonorrhoea, but the secrecy maintained regarding these diseases, the desire of patients to keep their condition from being known, and the quack remedies offered the public from many sources, make the value of quarantine doubtful. So far it has not been tried out in Canada in connection with Venereal Diseases.

One argument used against quarantine is, that though correct in theory, it is useless in practice, and that while failing to stop the introduction of the disease, it leads to great individual hardship, and commercial dislocation. This again is not so much an argument against quarantine, as it is an admission of the lax enforcement of quarantine due to human thoughtlessness, carelessness, or indifference, thus allowing a leakage somewhere for the infection to spread.

Whatever its limitations, quarantine is especially important as an educator of the public in the laws of health. It acts as a warning that hygienic principles must be enforced if the public health is to be safeguarded.

To be effective, quarantine regulations must be rigorously and efficiently enforced, but to this end, early and correct diagnosis of the disease is essential. If this can be brought about and means found to isolate carriers and mild cases that at present are often missed, quarantine would become effective in practice as well as in principle. Besides, there must be uniformity in the interpretation and carrying-out of the quarantine regulations, and not the slipshod method in vogue at present in many parts of this province, where even adjoining townships and their respective Medical Officers of Health have different opinions and rules for the control of outbreaks of measles, whooping-cough, scarlatina and other communicable diseases.

Canadian Social Hygiene Council

A Social Case Sheet Investigation

RESULT OF SURVEY OF VENEREAL DISEASE PATIENTS IN HOSPITAL CLINICS IN THE CITY OF TORONTO DURING THE MONTHS OF JULY AND AUGUST, 1922, BY MILDRED KENSIT.

TO reach the public and to make them realize the seriousness of the social problem of Venereal Disease rampant among all communities in which we live, it was felt that the quickest way to bring such problems home to the public mind was to collect certain facts from the patients themselves. With this end in view I was instructed by the Toronto Social Hygiene Council to search the actual social case sheets and records of Venereal Disease patients attending Hospital Clinics in the City of Toronto in the case of women patients a personal interview was sought and many additional facts were obtained, not before recorded. Very few cases of either men or women who denied immorality but claim they were innocently infected, are recorded in this survey because one of the principal ideas in making the survey was to try and arrive at causes and conditions which lead to immorality, followed as a result by infection with Venereal Disease. One hundred women's records were examined, the large majority of whom were also personally interviewed. Fifty-six men's records were examined, but the investigator did not personally interview them afterward.

We will first summarize the women.

THE NATIONALITY of 100 women involved was as follows:—

Canadians	62
English	14
Scotch	3
Irish	2
Can. Indian	6
Fr. Canadians	9
Italians	1
Newfoundland	1
West Indies	1
United States	1
	100

THE RELIGIOUS DENOMINATIONS to which they belonged were as follows:—

Anglican	18
Methodist	23
Presbyterian	16
Roman Catholic	28
Baptist	6
Lutheran	1
Salvation Army	3
Jew	1
Latter Day Saint	1
Protestant	1
Unknown	2
	100

As regards *standard of education* reached it was found that most of them had had some education at public school, but that a very small percentage completed Public School Grades or went on to High School. The figures were as follows concerning 100 women examined:—

Public School	71
Public School (Separate)	7
Public School (English)	7
Convent	6
Institution	3
No schooling	1
Public School (Scotch)	2
Public School (Ireland)	1
West Indies	1
Public School (Indian Reserve)	1
	100

RELATION OF AGE LEAVING SCHOOL TO STANDARD ATTAINED (Women)

Age	Jr. 1	Sr. 1	Jr. 2	Sr. 2	Jr. 3	Sr. 3	Jr. 4	Sr. 4	Ent.	H. S.	Unknown	Total
9 yrs.											1	1
10					1							1
11				1								1
12	1		1		4	2	2	1			1	12
13			3		4	4	3	4				18
14			1		6	8	8	6	3	2		34
15			1	1	1	3	4	1	1	1	1	14
16			3			3		2	1	1		10
17			1		1					1	6	9
Total	1		10	2	17	20	17	14	5	5	9	100

The above table has been compiled from statements made by patients whose education had been in many cases obtained in countries or provinces in which the grading is not the same as in Ontario. In such cases the grading has been adjusted to fit into a table of Ontario grades.

While the number of cases investigated is not sufficient to justify any important conclusions it will be noted that 59 out of 67 individuals leaving school at 14 or earlier, i.e. 88% reached the Third book or better, or in other words, attained an approximately normal grade.

33 left school before the age of 14.
14 left school at the age of 12 or younger.
14 left school at the age of 15.
10 left school at the age of 16.
9 left school at the age of 17.

Many factors account for the cases leaving school late and for the fact that a certain percentage of both these and those who left school earlier did not attain normal grades. In looking over case sheets one cannot but be impressed with the fact that frequently broken homes and bad environment did a great deal to counteract good school influence. In addition there is the factor of feeble-mindedness.

The fact that 33% of the persons examined in the survey left school before the age of fourteen would imply either a laxness on the part of educational authorities or a failure on the part of the parents of the class of person examined to either appreciate the value of education or exercise proper control over their children, or both. It is probably another demonstration of the extent to which bad home environment will interfere with the efforts of educational authorities.

Special attention was given as to how the *recreation* hours of the women were spent, because the lack of properly supervised recreation is a large factor in the immorality of people. It was found that among 100 women "Movies" ranked highest as an attraction, sixty-five out of one hundred attending regularly. Next in favour was "Dancing," fifty-six out of one hundred attending dance halls once or twice a week. Next in order was "Motoring," forty-six out of one hundred succeeded in obtaining joy rides. Other forms were Reading thirty-four, Sewing only twenty-three women out of one hundred, ever doing any; Skating came next with seventeen Patronesses. In the following order came, walking, eleven; swimming, six; boating, five; game, four; music, three; cards, one.

The dance halls were largely used for soliciting and as a rendezvous to make arrangements to meet afterwards and go out in a motor, but no actual immorality took place in the halls except in one instance. One very common sequence discovered in tracing the social conditions of the women was the ever recurring tale of leaving school, starting life in domestic service, then in a few years, utterly sick of domestic conditions and isolation, drifting into restaurants as waitresses. From there the next step was to become a prostitute. These three steps were traced in the lives of no less than twenty-two girls out of one hundred. It is difficult to give exact figures as to occupations of the women, as I found they so frequently changed their work remaining for a month or two in service, then perhaps trying factory work or waitress' position. Many of them tried everything in turn.

Questioning showed that occupational work was as follows by one hundred women, many coming under two or three headings.

Domestic work	48
Factory	37
Waitress at restaurant	18
Hotel Maid	8
Prostitutes	40
Clerks	17
Living at home	16

HOME CONDITIONS.

It is a well-known fact that what is known in social parlance as "broken homes" where either one or other of the parents is dead, or has deserted, plays a large part in the making of delinquent boys and girls, and the followng facts were found:—

Death of father	18
Death of mother	23
Desertion by father	5
Desertion by mother	2
Parents separate	9
Institution (Orphan)	7
Drink (on part of parent)	4
Sickness (on part of parent)	1
	69

Therefore broken homes entered into the social conditions of sixty-nine girls out of one hundred.

THE HOME CONDITIONS of the one hundred women showed that the following existed:—

Living in rooms	37
Living in boarding houses	3
Domestic service	16
House of prostitution	4
Own home	40

The high percentage of immorality under classification of "own home" is due to a variety of causes. Generally the home was not a normal home, in a large percentage of cases women living in their own homes, frequently separated from their husbands, or deserted, took roomers, with whom immorality took place.

In the case of single girls, lack of parental supervision or control was obvious. In one case, the mother retired to bed at eight o'clock, leaving her young daughter of fifteen years to entertain boy friends downstairs, with the result that immorality took place. Mental examination showed that this girl was quite normal.

In spite of the fact that nominally these forty-four cases were living in their own homes, the factors under heading "broken homes" entered in and played their part.

CONDITIONS AT TIME OF IMMORALITY.

This heading was sub-divided into four—single, married, separated or widowed. As might be expected, immorality was largest among the single and when it occurred after marriage in twenty-one cases out of one hundred women questioned separation from husband was the cause given in eleven cases, and three women were widows among the immoral one hundred women, leaving seventy-seven out of one hundred women immoral when single.

AGE OF FIRST IMMORALITY.

The investigation shows that the greatest immorality takes place among young girls at the ages of 14, 15, 16, 17, 18 and 19.

Records were as follows:—(100 women).

1 at 10 years (incest).
1 at 13 years.
5 at 14 years.
13 at 15 years.
12 at 16 years.
16 at 17 years.
16 at 18 years.
9 at 19 years.
6 at 20 years.
1 at 21 years.
5 at 22 years.
1 at 23 years.
1 at 24 years.

2 at 26 years.
1 at 27 years.
1 at 28 years.
1 at 29 years.
1 at 31 years.
1 at 37 years.
1 at 40 years.
2 Unknown.
3 deny immorality.

LOCATION OF IMMORALITY.

The investigation showed that the automobile to-day is a most important factor in immorality, and in relation to the opportunity to get out of the city parks and country roads figures largely in the location at which immorality takes place and appears gradually to be relegating the regular house of prostitution into the background. The following locations showed these figures:—

Parks	18
Country Roads	15
Own home	15
Place of assignation	1
House of prostitution	18
Auto	45
Men's room	11
Girl's room	20
Hotel	19
Others	10

Under the heading "others" the details were:

4 in friends house.
1 working place.
2 blind pigs—one in Hull, one in Windsor.
1 summer camp—outside Windsor.
I dance hall.
1 school grounds.

Parks in detail are:

Hamilton	2
Windsor	4
Ottawa (Rockliffe)	3
Montreal	1
Penetang	1
Toronto (3 High Park, 1 Islington, 2 not known)	6
Detroit	1
	18

Another fact disclosed in the auto traffic was the frequency with which girls were known as "on call," that is to say, the taxi cab men telephone girls who are prepared to expose themselves to the drivers' customers. The usual charge is $3.00 for the girl, $2.00 to the taxi driver.

Among the cities and towns widely scattered over the Province of Ontario, Toronto leads as might be expected, both because of the larger proportion of population within a small area, and because the patients are for the most part living in Toronto. The district covered is wide, as the following figures show, the patients claiming that infection was contracted in the cities and towns named:

Toronto	39
Windsor	7
Stratford	1
Gatineau District	1
Sault Ste. Marie	4
Sturgeon Falls	1
Ottawa	12
Hamilton	7
Belleville	1
Markham	1
Hull, Que.	7
Oakville	1
Whitby	1
Greenfield, Ont	1
Parry Sound	2
Port Arthur	1
Montreal	3
Pickering	1
Penetang	1
Aurora	1
Paris	2
Barrie	1
Trenton	1
Keighley, Eng.	1
Greenwich, U. S. A.	1
Detroit, U. S. A.	1
	100

What form does *remuneration for immorality* take with women? Out of 100 women 48 were paid actual cash varying from $2,00 to $15.00, averaging between women who definitely stated the money received at $4.83 per exposure, and those (17) who would make no statement beyond the fact that payment was received.

18 out of 100 accepted clothes in payment.
21 out of 100 accepted meals in payment.
16 out of 100 accepted tickets for dancing in payment.
22 out of 100 accepted movie tickets in payment.
24 out of 100 accepted joy rides in autos in payment.
22 out of 100 stated that no payment of any sort was demanded.

Under the heading *Sexual History* the women were questioned as to the reasons for their first immorality and under the following heads this question was answered:

22 out of 100 were forced the first time.
33 out of 100 claimed mutual agreement.
16 out of 100 claimed promise of marriage.
26 out of 100 desired the money to spend.
23 out of 100 were persuaded.

The investigator found that though in some instances apparently force was present at a first exposure, if as a result the girl did not become pregnant she lost her fear of consequence and continued immoral life.

Many of the women fell under more than one heading, starting in one and eventually continuing under another, so that it was dfficult to classify this group with any degree of correctness. Many women, after being forced the first time, continued by mutual agreement, or for desire for money.

SEX EDUCATION.

Sex education was conspicuous by its absence, and in a few cases where the women said they had knowledge, when questioned it was discovered that it only amounted to vague warning, not to do such and such things, but the women had no real knowledge of themselves or the forces controlling their lives. Seventy-five out of 100 women had no sex education, 21 had had vague warnings of things not to do, while four could not be questioned as the patients were not available.

CIRCUMSTANCES UNDER WHICH MEN AND WOMEN MET.

This group also was exceedingly difficult to classify, as many of the women came under at least three headings, sometimes one condition prevailing, sometimes others.

55 out of 100 women were "picked up."

26 out of 100 women were "introduced" to one another by a friend.

7 out of 100 women were "schoolmates."

42 out of 100 women "solicited."

45 out of 100 women met "old friends."

Fourteen of the 100 women were examined for mental deficiency with the result as tabulated, which certainly does not support the popularly supposed theory that this class of women are mental defectives. It is true, that many are subnormal, either too emotional, or over sexed, that is to say easily influenced by sex suggestibility, but the majority in my opinion are not subnormal at all. Bad environment, lack of opportunity, broken homes, lack of recreation of a healthy nature, the monotony of poorly paid occupational work cause a reaction towards excitement in some form or other.

Mental testing results were as follows, taken of 14 women believed to be mental defectives:—

NUMBER.	VERDICT.
3	Dull normal.
1	Typical prostitute.
2	High grade morons.
1	Bright, but professional prostitute of dangerous type.
2	Mental defective.
3	Normal.
1	Sub-normal, emotional.
1	Apparently normal.
—	

14 out of the 48 in one clinic were examined for Mental Deficiency.

This paper will be followed next month by an analysis of social histories taken of men patients.

Social Background

The Church as a Social Agency

F. N. Stapleford, M.A.

EVERY normal church has about it a cluster of activities which make it a factor of large importance viewed from the social standpoint alone. Through its clubs and classes, Sunday school, women's meetings, brotherhoods and Public services, the church is a vital centre of community life. It is at once an educational stimulus, a recreation centre and the propagator of a moral and spiritual culture. In some communities, indeed, it stands as a lonely beacon light, amid the surrounding fog of localism and prejudice, and those degenerative and brutalizing influences which are universally present.

In a small community an acute denominationalism makes sad inroads upon the community spirit, but even although at times the church must be regarded as a divisible rather than a unifying factor the church still remains an exceedingly important unit in the educational, recreational and moral life of the community. It may appear that, in the multiplicity of activities, the church is in danger of neglecting its spiritual function. The exact contrary is the case. Those churches which emphasize a large programme of activities are usually precisely the ones whose spiritual life is most virile. Religion is like happiness, it often comes as a byproduct of other pursuits. That church is most apt to make the largest contribution to the religious development of its young people, which recognizes whole heartedly the legitimacy and normality of a wide range of youthful interests. Religion is the spirit of the whole of life, not of a fraction of it.

The question, then, of the supervision and direction of these activities is a matter of large importance. In the larger cities, especially in Canada, a mistake is made in putting an undue proportion of money into church plant rather than into service. A city church may have a capital investment of very large amount and quite often the only paid worker is the pastor, with possibly the assistance of one deaconess. It would seem to be a violation of good business principles, through such an undue economy on the service side, that the church plant yields only a fraction of its potential usefulness. Many churches in the United States are now operating with a very considerable staff of workers. This would seem to be a needed change. At any rate, no social service organization attempting to cover as wide a scope of work, or dealing with anything like as large a constituency, would try to operate with so inadequate a staff. The churches had in this the splendidly democratic ideal of raising up a large corps of volunteer workers. It would be a great mistake to do anything which would weaken this, but experience has shown that the best kind of volunteer work can be done under skilled and tactful leadership. A director of religious education, or a social service worker, would not in any sense displace the usual officers and workers, but could make their work more fruitful by showing the best avenues through which it may find expression. Many churches, even (or perhaps especially) large churches, suffer from ingrowing pains. They are cribbed, cabined and confined and have lost real impact on the community. They have become social clubs, rather than missionary forces. Active able leaders would help to break the enclosing crust, and lead out the church energies in real service.

In matters of relief the church stands between two dangers. It cannot on the one hand totally ignore the material misfortunes that come to the poor members of the community without lying under the charge of heartlessness and neglect, while on the other hand, a generous relief policy may attract to the church a group of people who are there only for the loaves and fishes. Imposition when masquerading under a religious cloak is of a particularly unlovely type. This difficulty is being overcome by the better training of deaconesses and other church workers in family rehabilitation and social case work methods and by close co-operation on the part of the church with the Associated Charities of the city.

Through the Sunday school and other organizations of the church many practical avenues of social contact and social discipline are opened. The Sunday school alone offers a social opportunity of great magnitude, provided its work is pushed back to the homes of the scholars. It is important not only for the actual benefit in training in character and citizenship which accrue to the scholars, but there is a powerful and extremely beneficial reaction upon the whole congregation, and especially upon those who occupy a place of leadership. In this connection it seems particularly unfortunate that the larger churches, and by that I mean both the size of the church building and the membership roll, are precisely the ones which are weakest in this regard. Their Sunday school and club work is usually most perfunctory. The large church in Toronto, at any rate, exists for about the sole purpose of keeping up two Sunday services, and is a negligible influence as far as being a real factor in the local community. It is an open question whether the large sums involved in their up-keep could not be spent to much greater advantage. It may also be in order to point out that in these days of democracy the church could speak with a much clearer voice if her own house were set in order in this regard. The local church is an oligarchy, sometimes a plutocracy, rather than a democracy. There is scarcely a church in which the actual control is not invested in four or five people. If these four or five agree touching any one thing, it shall be done unto them. This denies to the hundreds of others composing the congregation a proper outlet for their energies. It is not so much that anyone is consciously autocratic, but the system is bad. The congregation as a whole takes but a perfunctory interest in the general conduct of business because accustomed to believe that these matters are the responsibility of the board. There is a great latent fund of energy ready to be tapped when the sense of responsibility is more generally diffused. Some churches are adopting the policy of holding a number of congregational meetings during the year, at which the members could meet for social fellowship, but at which also the more important items of church business could be discussed and decided upon. The abolition of the pew rent system is a necessary preliminary to any real democracy in the local church.

The local church could also perform a most valuable function in these difficult days by affording a meeting place or forum for the discussion of social problems, whether local or national. So many ominous social facts and problems are before the people at the present time that the net result on the individual is often a feeling of bewilderment and, to unbalanced minds, hasty and perhaps violent means of remedy suggest themselves. There are no short cuts to progress. Each step must be thought out carefully, and painfully, and in a democracy there is no other way to secure social action on any policy than through discussion and persuasion. The temperance cause did not advance by destroying saloons in a physical sense, but by the presentation in a convincing way of the real facts as to the results of the use of alcohol for beverage purposes. Free discussion in a spirit of Christian sanity and comradeship is one of the great needs of the time, and the church could provide the proper atmosphere in which this could be secured. To quote the report on "The Church and Social Reconstruction" of the Federal Council of the Churches of Christ in America.

"The value of the Church for National Causes is one of the outstanding discoveries of the war, and its assistance is now being sought by every great movement. The church should respond with all its power, especially through pastors, and the public press, bringing into action all its educational facilities and taking its place in the community organization to which all such movements finally come for their main effort.

"The church is both an educational force and an institution organized for Neighborhood and Community Service. Its buildings are important social centres, capable of great enlargement of activities. If directed intelligently, and with public spirit, so that it can never be truthfully charged with self-seeking, or the desire to control the state, it may become one of the potent and beneficient factors of a turbulent era."

News Notes

The December Monthly Meeting of the Hamilton, Ontario, Medical Society was given over entirely to the discussion of the treatment of Venereal Diseases. Dr. R. H. Paterson read a very interesting paper on Syphilis and gave a resume of the work being done in the Venereal Disease Department at the Hamilton General Hospital.

A moving picture demonstrating the modern treatment of Gonorrhoea was shown by Dr. R. R. McClenahan of the Provincial Board of Health, Ontario.

Local medical societies are now realizing more and more the importance of having a thorough knowledge of the modern treatment of syphilis and gonorrhoea.

In the early part of the month, a representative group of Toronto public health workers, met at the King Edward Hotel to do honour to Dr. August Ley, the eminent Belgian psychiatrist. Outlining the provisions which exist in Belgium for the care of the insane and feeble-minded, Dr. Ley dwelt with particular emphasis upon the unique colony at Gheel.

As far back as the fifth century there was a shrine at Gheel to which came persons afflicted with mental disorders. There being no institutions for the housing and care of the pilgrims, it was the pious custom of the peasants to receive them into their homes. This unbroken tradition has prevailed unto the present day. The colony now possess a small reception hospital and a resident medical staff, but the chief feature the "Boarding out" remains unchanged.

Twenty-six hundred persons are boarded out among the inhabitants. These patients are treated as members of the family and take part in all the daily activities, whether it be on the farm or in a trade.

The proper care of the mentally handicapped has been handed down from father to son for generations. Only homes of irreproachable character are allowed to receive patients, the right can be revoked by the authorities at any time for good cause. As a result to have as a member of the family circle, an insane or feeble-minded person, is looked upon as a certificate of standing and reputability, and the right is jealously guarded. The young members of the resident families, take training as mental nurses as a matter of course as ordinary schooling.

It is understood that the health of the inhabitants should benefit from the residence in their midst of a staff charged with the medical oversight of the patient, but it is worthy of special mention, that not only is the standard of health in Gheel higher than in the surrounding communities, but there is a higher cultural level as well.

Gheel, as Dr. Ley justly said, is a miracle. It flourishes because its roots are deeply imbedded in a religious feeling hallowed by age long tradition. It is fascinating to conjecture what influences might be at work to-day, in mental hygiene in North America, had such a colony come into being in the early days of say—St. Anne de Beaupre.

The plan could not be transplanted bodily into twentieth century conditions; but the irrefutable success of Gheel points to the feasibility of colonizing many of the insane and feeble-minded, who are present confined to custodial institutions.

The Annual Meeting of the Dominion Council of Health was held at Ottawa from November 28th to 30th. Uniformity in the regulations concerning communicable diseases was recommended, which it is hoped will apply to all the provinces.

Mrs. Pankhurst and Dr. J. J. Heagerty of the Dominion Department of Health, speaking under the auspices of the Ottawa Social Hygiene Council addressed a large meeting in Russell Theatre, Ottawa, on the evening of December 1st.

Dr. Heagerty speaking on a "New Public Health Problem" gave a remarkably frank address on the subject of Venereal Diseases as a public health problem. Mrs. Pankhurst with her usual eloquence spoke on a "A New Crusade." Her address covered not only the social and moral aspects of the problem, but means to be undertaken for prevention.

Mr. Justice Riddell and Dr. Gordon Bates addressed a second meeting in Ottawa on the afternoon of December 16th.

Dr. J. A. Amyot, C.M.G., Deputy Minister of Health, Ottawa, addressed a meeting in Hawkesbury, Ontario, on December 7th in connection with the demonstration now being carried on by the Provincial Board of Health of Ontario to appoint Public Health Nurses in the County of Prescott. Dr. W. J. Bell, of the Provincial Board of Health, also spoke at the meeting at Hawkesbury, and in the afternoon held a very successful Baby Clinic, which was attended by all the local doctors.

A Child Welfare meeting was held on Friday evening at Vankleek Hill, Ontario, when addresses were given by Dr. W. J. Bell and Dr. J. J. Middleton of the Provincial Board of Health of Ontario, and Dr. P. J. Moloney, District Officer of Health for Eastern Ontario.

Dr. W. H. Hattie has resigned from the position of Provincial Health Officer for Nova Scotia, to take the chair of public health and hygiene in Dalhousie University.

Dr. Hattie's record during the years in which he has served the Government and the people of his native province is altogether commendable and praiseworthy. As Superintendent of the Nova Scotia Hospital for Mental patients, he brought the institution to a high point of efficiency. As Provincial Health Officer, he has done a still greater service. Under his leadership, public health in all its branches has been brought to the attention of the people. Dr. Hattie lost no opportunity of fearlessly lifting up his voice on behalf of the more humane and scientific treatment of the insane and feeble-minded.

It is pleasant to think that in this case, Dalhousie's gain is not Nova Scotia's loss. As professor of those subjects in which he is a recognized authority, Dr. Hattie will greatly influence, through the successive classes of young men at the University the thought and life of the province.

Dr. A. C. Jost, who has been for some time associated with the Provincial Department of Public Health in the capacity of Divisional Medical Officer and Inspector, now becomes Provincial Health Officer for Nova Scotia.

Dr. M. M. Seymour, Commissioner of Health for Saskatchewan, and Dr. Gordon Bell, Chairman of the Provincial Board of Health, Manitoba, were in Toronto recently and visited and inspected Spadina House, the Headquarters of the Ontario Provincial Board of Health. They were very much impressed with the office space and the facilities for carrying on the health work throughout the province.

Dr. A. R. Riddell, late of the Soldier's Civil Re-establishment, has been appointed Clinician in Occupational Diseases, Division of Industral Hygiene, Ontario Provincial Board of Health.

The Christian Guardian, Methodist organ in Canada, announces in its last issue its refusal of all patent medicine advertising.

It believes that patent medicines hurt rather than help, and declares that it is willing to pay the heavy price of thousands of dollars worth of advertising lost in order to keep its conscience clear.

The Guardian says:—

"Probably there are a good many people among our readers who do not quite know how serious a matter it is looking after the advertising columns of a paper such as this to see that nothing of an objectionable or doubtful character is allowed to get in. During the past week our advertising manager has been compelled to refuse advertising that would net many hundreds of dollars during the year, just because it related to patent medicines that were judged to be of an unsatisfactory character.

"It is all the more difficult to take this stand when we note tha most of the secular papers and some of the religious ones as well accept such advertising quite freely. And as a rule, advertising of this sort is quite freely handed out and the advertiser makes no objection whatever to paying the highest rates. If this paper was willing to accept all the patent medicine advertising that would come to it during the year its income would be increased by many thousands of dollars, and this is one of the prices that it has to pay to live up to its conscience in a matter of this kind. It believes that patent medicines, as a rule, are really detrimental to health, and for that reason it refuses to admit them, even though that refusal involves very heavy financial sacrifice."

Miss Edna Moore, Social Service Nurse of the Provincial Board of Health of Ontario, attended the Educational Conference held at Barrie by the Trustees and Ratepayers' Association of Ontario. The film "How Life Begins" was shown, and much appreciated. Miss Moore also showed this film "How Life Begins" to a Women's Auxiliary meeting in Orillia and also at the Training School for Nurses at the Orillia General Hospital.

A novel and interesting scheme in connection with the treatment of syphilis and gonorrhoea is being tried out by the establishment of Venereal Disease Clinics in connection with the Provincial Board of Health Laboratories at North Bay and Peterboro.

ONTARIO

The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE PROVINCE FOR THE MONTH OF NOVEMBER, 1922.

COMPARATIVE TABLE.

	1922		1921	
Diseases.	Cases.	Deaths.	Cases.	Deaths.
Small-pox	76	0	76	0
Scarlet Fever	461	9	513	12
Diphtheria	385	29	940	82
Measles	235	0	36	1
Whooping Cough	309	8	78	9
Typhoid	37	11	72	21
Tuberculosis	156	84	202	117
Infantile Paralysis	10	1	10	1
Cerebro Spinal Meningitis	3	3	6	5
Influenzal Pneumonia	....	10	....	14
Primary Pneumonia	....	172	....	169
Syphilis	147	....	256	....
Gonorrhoea	217	....	287	....
Chancroid	4	....	2	....

JOHN W. W. MCCULLOUGH,
Chief Officer of Health.

The interesting feature about the November Report of Communicable Diseases for the Province of Ontario are:

1. The marked decrease in the number of cases of diphtheria over the number for November, 1921.

2. The notable increase in measles and whooping cough this month over the same month last year. Apparently, however, both diseases are not of the severe type as the number of deaths is no greater than last year.

3. There is a decrease in the number of cases of syphilis reported this month over those reported in the same month last year.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society:

Health Talks.

Suggestions to public health lecturers by Dr. Dana Hubbard, Director of Public Health Education, New York City. This article abounds in practical advice and should be read by everyone who wishes to give better health talks. ("Monthly Bulletin of the Department of Health," New York City, October, 1922, page 225.)

Healh of School Children.

A comparison of absence from schools on account of sickness and from causes other than sickness, among boys and girls. ("Public Health Reports," U.S.P.H.S., October 27th, 1922, page 2683.)

Nutrition and Education.

A study by the United States Public Health Service of the health effect of school attendance at an early age. The report finds that a healthy child shows no physical harm from attending school at the age of six years. ("Public Health Report," U.S.P.H.S., November 10th, 1922, page 2798.)

The Beginnings of Child Welfare.

A short history by Miss Edith Bryan, Associate Professor of Public Health Nursing in the University of California. ("The Pacific Coast Journal of Nursing," November, 1922, page 693.)

The Public Health Nurse and Tuberculosis.

The role of the public health nurse in anti-tuberculosis prophylaxis in the home. By Dr. René Sand and Miss Katherine Olmsted, of the League of Red Cross Societies. ("The World's Health," September, 1922, page 406.)

Nurses and Mental Hygiene.

The function of public health nurses in the mental hygiene movement. By Miss A. C. Haupt, Superintendent of the Minneapolis Visiting Nurse Association. ("The Public Health Nurse," November, 1922, page 563.)

Public and Private Health Agencies.

The respective functions of public and private health agencies. By Dr. Royal S. Copeland, Commissioner of Health, New York City. ("Better Times," November, 1922, page 8.)

Rural Recreation.

A booklet issued by the Community Service of New York City, giving suggestions for utilizing the resources of rural communities for recreation.

The Use of Dairy Products.

A series of pamphlets issued by the Dominion Department of Agriculture:—

Why and How to Use Milk.
Why and How to Use Buttermilk.
Why and How to Use Skim Milk.
Why and How to Use Cream.
Why and How to Use Cheese.

Toxin-Antitoxin in Diphtheria.

By Dr. William H. Park, of New York City. An investigation of toxin-antitoxin in diphtheria during the past 25 years shows that this preventive measure, if properly administered and controlled, gives immunity to diphtheria in at least 90 per cent. of the children treated. This immuuity lasts for more than six years, and probably for life. ("Journal of the American Medical Association," November 4th, 1922, page 1584.)

Talks on Diphtheria.

A synopsis of talks on diphtheria given to nurses of the City Health Department engaged in anti-diphtheria work in Baltimore. ("The Public Health Nurse," November, 1922, page 577.)

Mortality from Tuberculosis.

A study of the mortality from pulmonary tuberculosis in recent years, conducted by the United States Public Health Service. ("Public Health Reports," U.S.P.H., November 17th, 1922, page 2843.)

Tuberculosis in Saskatchewan.

The report of the Saskatchewan Anti-Tuberculosis Commission contains much information on the prevalence of tuberculosis in Saskatchewan, and makes many important recommendations. ("Public Service Monthly," November, 1922, page 3.)

Public Health in England.

The annual report of the Chief Medical Officer of the British Ministry of Health for 1921.

Book Reviews

Tuberculosis in Infancy and Childhood. By J. Claxton Gittings, Frank Croz Knowles, and Astley P. C. Ashurst. Philadelphia and London: J. B. Lippincott Co.

The ten chapters in this book are based on a course of lectures delivered at the Children's Hospital, Philadelphia. The book is written for practitioners so unusual laboratory technique and terms outside the knowledge of the general practitioner are not used. It is essentially practical and covers the field most excellently. The problems of tuberculosis in diagnosis and treatment, tuberculosis of lymph glands, skin, bones and genito-urinary tract are clearly discussed and the decisions are in agreement with the best thought of the day on these subjects. It is well written so that it is easily read, and it is to be most highly recommended to the general practitioners for whom it is written.—G. S. S.

Editorial

THE PRESS AND PUBLIC HEALTH.

Great are the uses of advertisement, paraphrased a famous publicist recently. One cannot help pondering on such a statement when one considers to what extent public health authorities have applied the principle involved. After all, public health—the greatest of all commodities, must be sold to the public, to be effective. It must be sold in the form of good water supplies and good food, good sanitation—good and regular medical examination of the various sections of the community, good recreation, good home training for children and good social conditions generally—and paid for with good money like most things in this world. But the public will not buy unless they understand the nature and value of the thing to be bought.

It is worth while for every efficient health officer to stop occasionally and consider whether he is advertising his wares enough. A sale of chesterfields, of new polka dot ties or modish dresses means a full page advertisement in the local newspaper. A squabble between two politicians over something relatively unimportant means headlines and a leading aricle. A fluctuation in the death rate, or, indeed, a constantly high death rate, passes without notice unless it is caused by something spectacular, such as a war or an explosion, or the sinking of an ocean liner. The luxuries—for, after all, we could get on without chesterfields, and even without a good many politicians—are played up. The necessities—for after all human life, sacrificed often now because of thoughtless men, would normally be classified as a necessity—are neglected.

Where such a condition can exist something is obviously wrong, and a casual estimate of the percentage of leading articles which deal with public health in the great newspapers of the country will soon convince one that it does exist. Nevertheless great is the power of the press, and until the press puts public health first, interest in public health as a subject of paramount importance will lag. The moral of which for the health officer is simply that he should consult and confer more frequently with the editors of his community than he has in the past.

SOCIAL DISEASE AND SOCIAL HYGIENE.

It has been suggested by at least one famous educationist and sociologist that the great problems of the world will be ultimately solved as a result of researches undertaken in hospital wards. The value of such an observation should be obvious when one considers that such investigations constitute enquiries into damage done to human life, human happiness and human efficiency. The results of such a searching must always be of great importance as compared to enquiries made in economic or industrial fields—great as is the tendency to-day to base political action on movements in the body politic whose ultimate significance is often slight.

Exact knowledge as to the damage done to the human race by disease is essential because it is likely that only as a result of such knowledge will basic reformative action be commenced. In the past action has tended to be in the direction of organizing medical treatment or curative facilities. The sane method is, of course, to change causal conditions. In perhaps a majority of cases such conditions can best be investigated in hospital wards.

Of particular interest in this regard in the present issue is a report of an investigation among venereal cases compiled by Mrs. Mildred Kensit for the Canadian Social Hygiene Council. Recognizing the fact that moral and social conditions lie at the bottom of the venereal disease problem, and that they must be thoroughly understood before we can act, Mrs. Kensit was asked to enquire into the life history of a number of young women whose infection had resulted from immorality. In her investigation such questions as the age of first immorality, the reasons stated for immorality, the type of education given the patient by parent or school, the age of leaving school, the home conditions, circumstances under which immorality took place, part of the country in which immorality took place—in addition to other matters have been taken up in detail. The result is a mass of information which, in spite of the fact that it refers to a limited number of cases, should be of great value to the various Social Hygiene Councils at work in Canada. A perusal of this report will repay readers of THE PUBLIC HEALTH JOURNAL.

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